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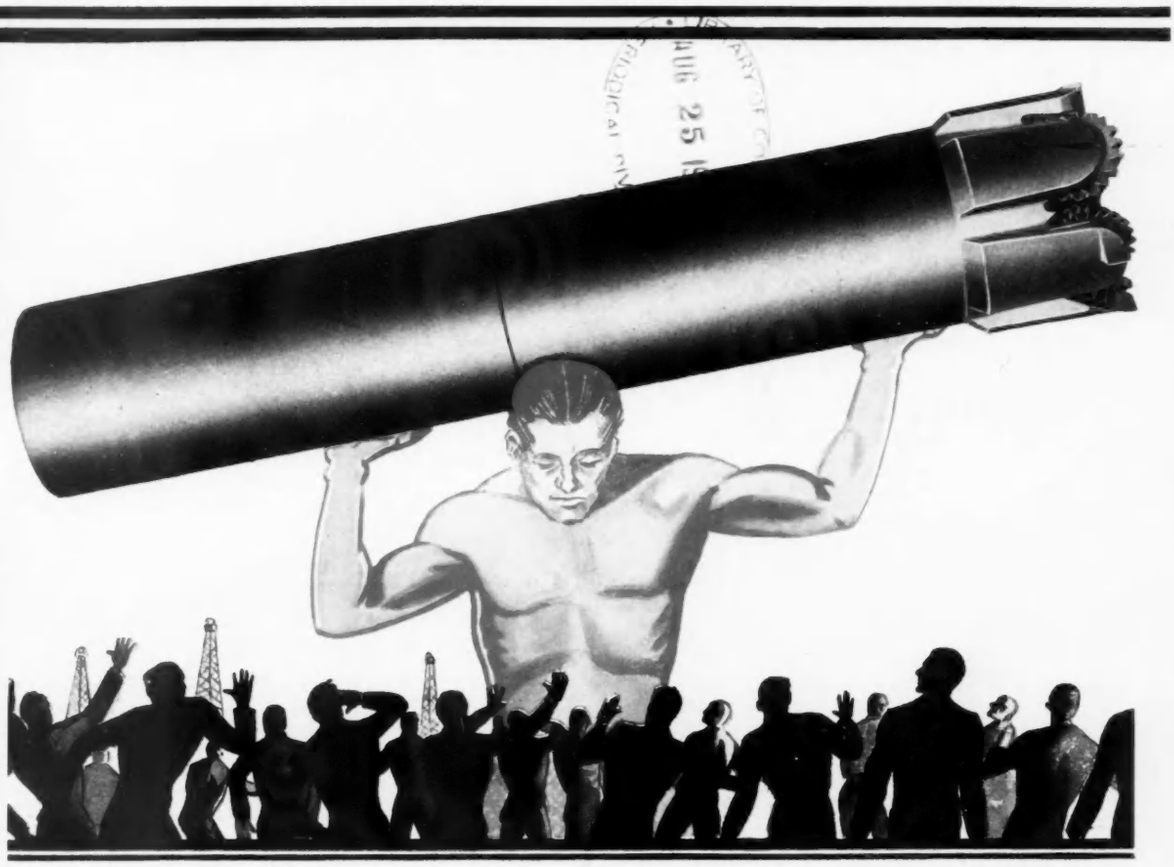
The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

AUGUST 8, 1932
me 66 Number 8



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GASO PUMP DESIGN SAVES POWER—LESSENS WEAR

GEARS

in the GASO Fig. 1508 Enclosed Power Pump are of Continuous Tooth Herringbone construction. They transmit power smoothly (to prevent needless stresses) and with 98.9 to 99.4 per cent efficiency (to save power) . . . When you examine any detail of any GASO Pump you find correct design and fine building which minimize operating and maintenance costs . . . Send your requirements for information on GASO Pumps to meet your needs. Gaso Pump & Burner Mfg. Company, Tulsa, Oklahoma.

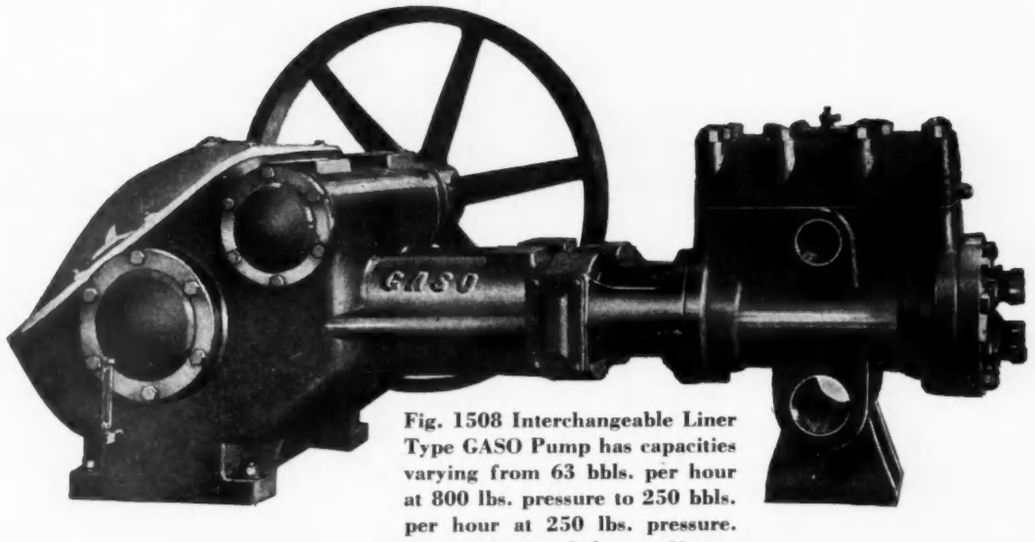
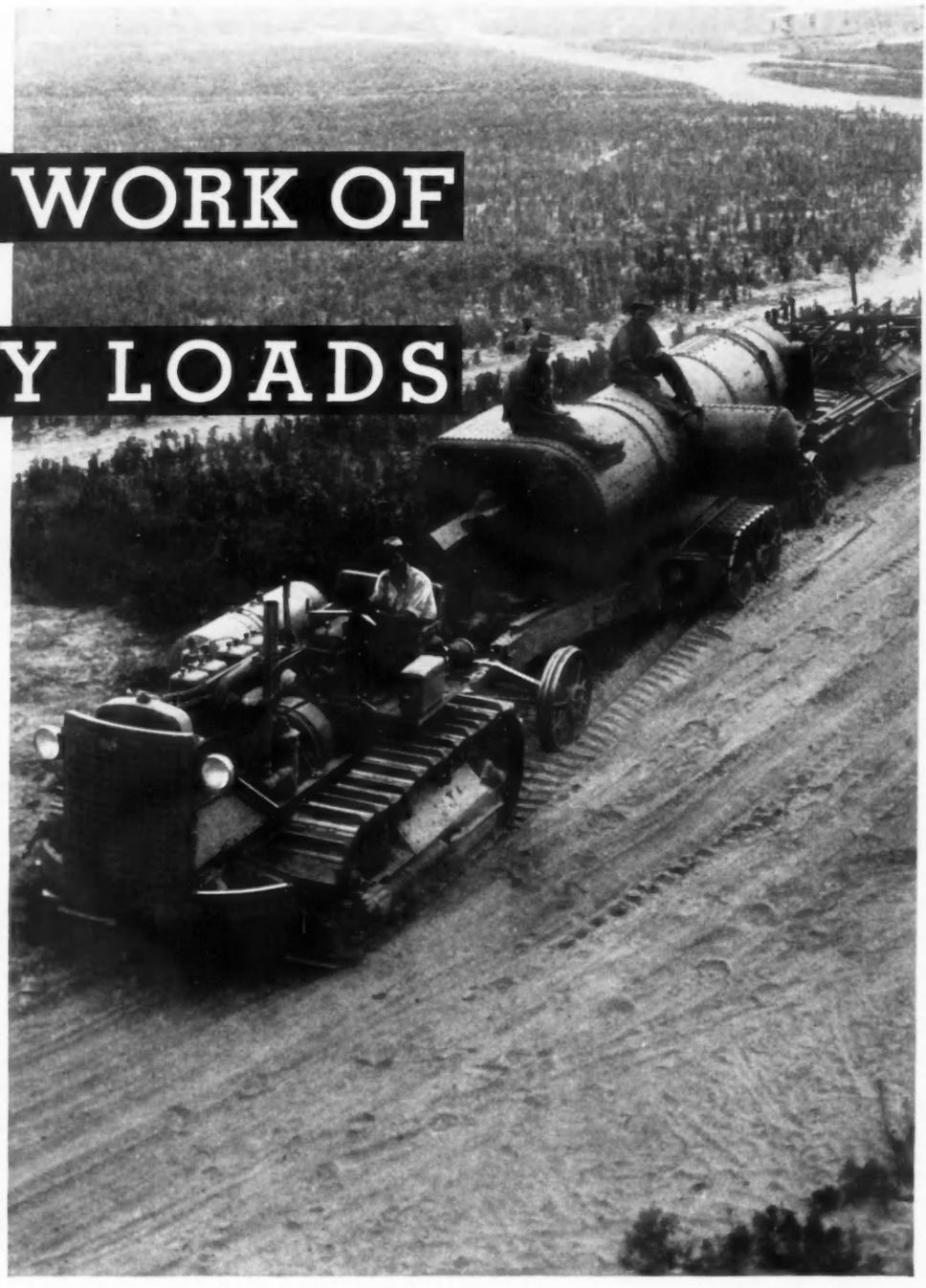


Fig. 1508 Interchangeable Liner Type GASO Pump has capacities varying from 63 bbls. per hour at 800 lbs. pressure to 250 bbls. per hour at 250 lbs. pressure. Arranged for belt or V-rope drive; direct connected to engine through flexible coupling; or for motor drive through silent chain or reduction gears.

GASO PUMPS

for every oil industry need

LIGHT WORK OF HEAVY LOADS



EQUIPMENT in an abandoned oil field is needed in a new location . . . the loads are heavy . . . the roads are sandy . . . part of the way there are no roads at all. What's the answer to a problem like this? The "Caterpillar" track-type Tractor, of course. For it was a "Caterpillar," no doubt, that first brought the equipment in. And a winch-equipped tractor serviced the wells—pulled rods and tubing—and brought in supplies. At every stage of the work, there's need for the dependable power and sure traction of "Caterpillar" Tractors.

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Track-type Tractors Road Machinery
Combines
(There's a "Caterpillar" Dealer Near You)

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TWENTY	$1450	FIFTY	$3675
TWENTY-FIVE	$1900	SIXTY-FIVE	$4350
DIESEL	$6500		

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REG. U. S. PAT. OFF.
TRACTOR

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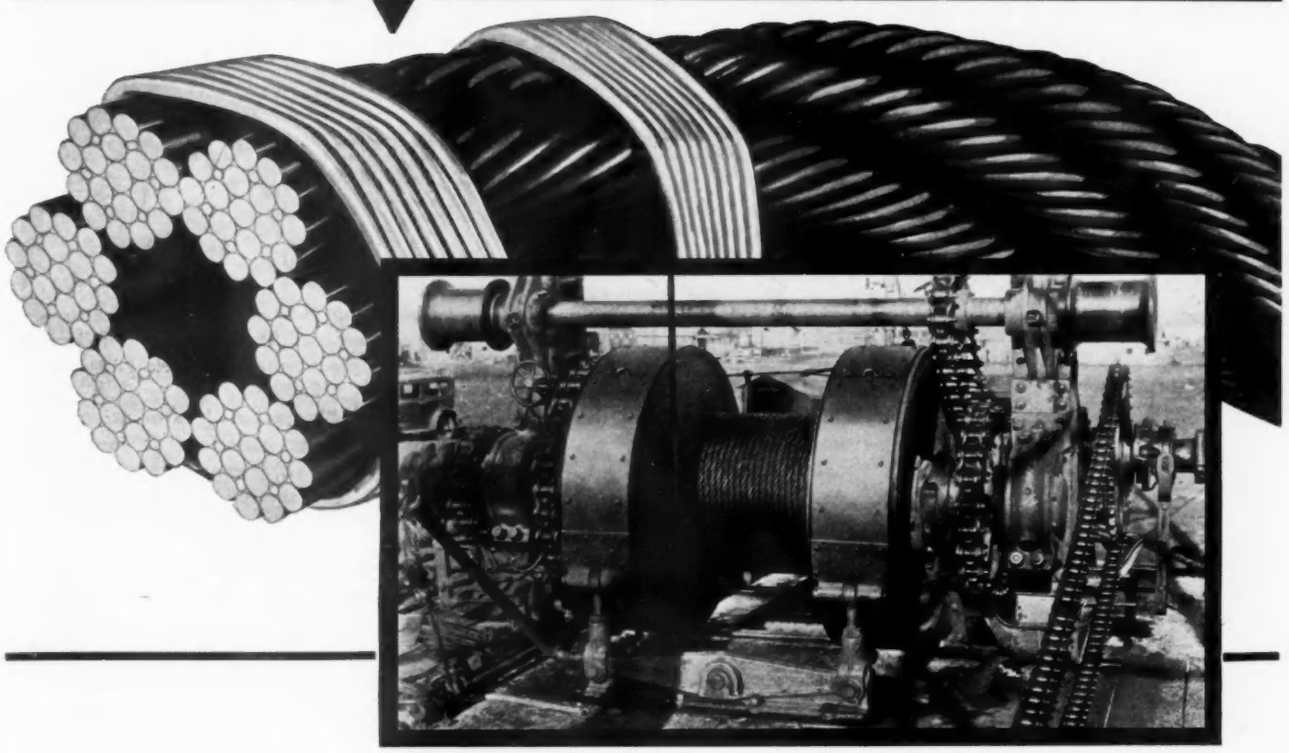
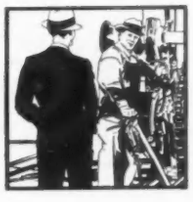


ROTARY

requires an even better rope



"Yes sir, when we worked cable tools we used Wickwire Spencer Wire Rope because it was tough and strong and wasn't quick to wear itself out on the sides of the hole. With this new rotary drilling we jerk and snap on the drill pipe . . . it would kill any ordinary rope. But Wickwire Spencer Rotary Drill Rope has the guts to stand it." And may we add that fishing for a drill pipe is far more costly and troublesome than similar work on a cable tool operation. Quality Rope Pays.

Wickwire Spencer Steel Company, 41 East 42nd Street, New York City; Buffalo, Chicago, Detroit, Philadelphia, Worcester; Tulsa, 314 E. Archer Street; Pacific Coast Headquarters: San Francisco; Warehouses: Los Angeles, Portland, Seattle; Export Sales Department: New York City

Send for our book. It is free and will prove of great value.

WIRE ROPE *by Wickwire Spencer*

BEFORE IT HAPPENS

• • • That's the time to prepare against failure

Cutaway of a Baker Cement Float Shoe showing internal Concrete and Bakelite valve construction used in all Baker Cement (Floating) Equipment.

The safety factors and strength of Baker Cement Floating and Cementing Equipment—Baker Cement Float Shoes, Baker Cement Float Collars and Baker Cement Whirler Shoes—exceed the collapsing strength of the casing.

Many serious failures in landing and cementing casing in a well are due to lack of wise preparation.

A *dependable* back-pressure valve prevents disaster which might otherwise result from parted casing, and removes the strain on rig and other equipment.

A *dependable* back-pressure valve breaks circulation each time the casing is lowered in the well.

A *dependable* back-pressure valve will instantaneously check any tendency of cement that has once passed through, from backing up into the casing. This tight immediate closure assures the best possible condition for a successful cement job.

The cut-away shows the exclusive patented construction of the Baker Bakelite valve assembly imbedded in a mass of extremely strong concrete.

The circulating areas through this new valve assembly are greater—in some instances as high as 139% in the smallest sizes—than formerly used in Baker Floating and Cementing equipment, which old equipment, by the way, served without failure in cementing the great majority of the deepest wells in the world. At Santa Fe Springs, where wells averaged from 6000 to 9000 feet in 1928-29, and where high temperatures were encountered, Baker "small hole" cement equipment did the work 100%.

The new "large hole" valve assembly is shown in the cut-away. It is fitted with a rubber valve seat to assure perfect and tight seating of the Bakelite Ball Valve.

***Most important of all*, is the fact that the concrete and Bakelite can be easily drilled out and disposed of (Note that the Bakelite is "on end" and imbedded in the concrete.)**

This means a distinct saving in drilling time and bit expense.

This means that you can core directly through and below the shoe.

This means you eliminate the danger to the cement job, which vibration in drilling a metal plug out of the shoe might cause.

This means that further drilling and coring operations cannot be hindered by objectionable pieces of material in the hole.

Back of Baker Cement Equipment is a long period of pioneering, research, field testing, and constant improvement, and it is only natural that the values and distinctive features in today's perfected equipment are protected by patents because of their originality and early introduction to the industry.

Use the Baker Cement Float Shoe, or the Baker Cement Float Collar or both together, to prevent costly failures in landing casing in a well.

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AUG 20 1932

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S. W. ROBINSON
Editor

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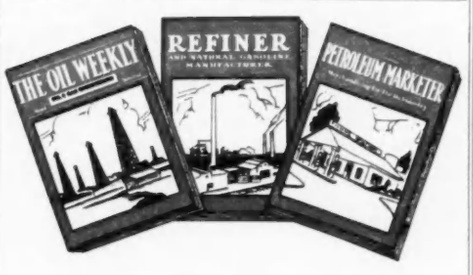

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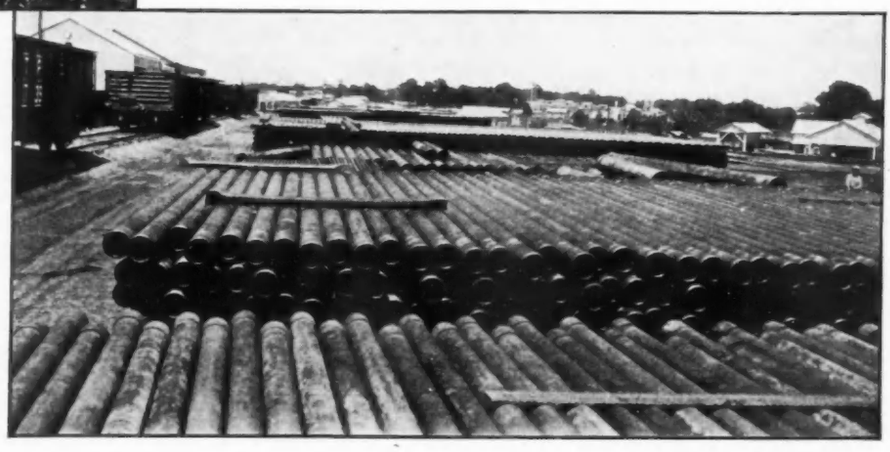
A view of one of many wells being drilled in which "Chester" casing is being used giving satisfactory and efficient service.

View of stock of "Chester" casing carried by one of the various oil companies for future use.



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CHESTER

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STEEL CASING

LINE PIPE

VOLUME 66, No. 8 AUGUST 8, 1932

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING ▪ NEWS ▪ STATISTICS

The Changing Panorama

By reducing crude runs to stills 88,100 (to 2,175,300) barrels daily, refiners removed 1,236,000 barrels of gasoline stocks from their storage during the week ending July 30, when 95.1 per cent of rated capacity reported to the American Petroleum Institute that their portion of facilities operated at 59.4 per cent of capacity. That the draft on stocks was not a mere shifting to other tanks is shown by a reported loss of 1,283,000 barrels in total of all motor fuel stocks, the quantity shown, including refinery, in transit and at terminals being given at 61,172,000 barrels. The latter figure is in the neighborhood of five million barrels above a year ago, and study of the figures shows a larger percentage of gasoline on hand at terminals, etc., than last year. Production for the last week of July was shown at 2,140,000 barrels, indicating a withdrawal of 35,000 barrels daily from domestic stocks, which was not made up by imports which averaged 30,000 barrels for the week. Unreported operations of refineries will all be added to the quantity of crude removed from storage.

Page 21.

Deep Records

Failure of the deep test at Refugio to produce at its greatest depth was a disappointment by no means brought about by any fault in the way the drilling was handled or performance of equipment selected for the job. Hopes were that this deepest hole in Texas would bring production from its depth of 9131 feet, but the result was congratulation due the owner for his financial courage, the drilling and cementing crews for their skill in handling a difficult task, and to the makers of the equipment used for the performance of their appliances.

Page 25.

Those of the uninitiated who have been wondering why engineers have interested themselves with bottom hole pressures and what difference does it make, are due for some enlightenment as the discussion continues. Application of the knowledge gained so far has been limited because of limited information on correlation of bottom-hole pressures of wells throughout the productive life of an area, but the engineers are pointing to the time when knowledge of pressure changes through depletion of an area can be used generally and satis-

Pit-head of the D. E. A. oil mine, Wietze Field, Germany

factorily as a guide for gauging the best rate of recovery and equitably prorating such rate among producing wells in a field. So far the Yates field in West Texas is the only area that is prorated on the basis of well pressures, and the need for such practice is seen in several other fields where large wells are restricted to a small percentage of their possibilities. There are, of course, chances for errors in calculations by the pressure methods, but it should be as satisfactory as the method employed of opening wells for a few minutes test, especially in view of the tricks which some operators have been accused of using in making for themselves a higher rating. Page 34.

Gas Lines in the Air

Despite corrosion, swamps, expansion and onerousness of the Irish, not the least of the troubles of pipe line constructors is getting across rivers. And in overcoming this difficulty the pipe line people perform stunts that are interesting even to people who never expect to lay a pipe line. Each crossing is its individual problem, some of which are overcome by building suspension bridges far above possible flood. Some rivers that ordinarily have but a trickle of water have flood possibilities that cause gas pipe line men to almost adopt the methods of their friendly competition in the electric power field in getting their line up in the air. Page 38.

The Oil Man's Calendar

AUGUST

10 *Tennessee Oil Men's Association, Nashville, Tennessee.*
22-26 *American Chemical Society, Denver, Colorado.*
23-26 *Pacific Coast Gas Association, Spokane, Washington.*
30-31 *Society of Automotive Engineers, Cleveland, Ohio.*

SEPTEMBER

14-16 *National Petroleum Association, Atlantic City, New Jersey.*
21-23 *North American Gasoline Tax Conference, Philadelphia, Pennsylvania.*
21-22 *Ohio Petroleum Marketers Association, Columbus, Ohio.*

OCTOBER

1 *American Institute of Mining and Metallurgical Engineers, Petroleum Division, Dallas, Texas.*
3- 7 *National Safety Council, Washington, D. C.*
4- 6 *Society of Automotive Engineers, Transportation meeting, Toronto, Canada.*
10-14 *American Gas Association, Atlantic City, New Jersey.*
11-12 *Kentucky Petroleum Marketers Association, Louisville, Kentucky.*

NOVEMBER

10 *California Natural Gasoline Association, Los Angeles, California.*
15-17— *American Petroleum Institute, Houston, Texas.*

DECEMBER

Rocky Mountain Oil and Gas Association, Great Falls, Montana.
5-9 *American Society of Mechanical Engineers, New York.*

Continued drilling in the Zwolle area of North Louisiana has extended this field approximately 35 miles east and west with promise now that it may have even greater length. Results of drilling to depths normal for the area have not been so uniformly successful as obtains in East Texas, on the other side of the Sabine Uplift, although a relationship between these two spots has been assigned. Of interest at the moment are two tests which are carefully exploring deep possibilities in the Zwolle field, which have symptoms of important possibilities. In case these attempts find something attractive in the lower horizons, importance will accrue not only to the area drilled but also to the other side of the uplift where it will point possibilities of production lower than East Texas' present producing sand—not only below the area now productive but also closer in on the uplift. Less speculative are present possibilities of North Louisiana's one remaining actively important area adding more importance through deep production that is not too deep for attractively profitable production. Page 30.

Wouldn't Tell It

A good geologist friend would get frivolous with some of his brethren who discuss the over-hang of mushroomed salt plugs. In his pristine wisdom he has known all these years that salt can be drilled through but he stood by while many operators in ignorance as vast as his knowledge were stopping their effort when they touched the salt. Too bad that a little learning like that could not leaven the whole mass of humanity, like the salt does with the loaf. Page 72.

California has been curtailing production in spots for more than 10 years, and one of the outstanding accomplishments of the industry along this line is the agreement that keeps Ketlteman Hills in line. Page 16.

By Divine Right

East Texas continues to dominate the oil industry from every angle and now the figures indicate that having passed all other spots in Texas—and Texas has had some big fields—it is on every count entitled to all the attention and conversation it is getting. In less than two years from start, during which it had only a few days of open flow, the field has passed such veterans as Spindle Top, Humble and Corsicana-Powell, not to mention the younger contenders in West Texas. Page 13.

Pipe Line Records *To Be Audited To Check* Rumors of Stolen Oil

Committee Appointed by American Petroleum Institute Gets Cooperation from Lines in East Texas.

DALLAS, TEXAS, August 5.

THE auditing of private records of the major pipe line companies operating in the East Texas field by a committee appointed by the American Petroleum Institute in order to confirm, or allay whispered rumors that some of the companies have been guilty of transporting and purchasing crude produced in violation of proration rules will be undertaken at an early date.

Sanction of the committee and its objective was given by the American Petroleum Institute at the directors meeting held in Colorado Springs, beginning July 22. Officials of a number of major pipe line companies operating in East Texas requested that an investigation be conducted, and all present agreed to submit their records to an audit.

President Amos L. Beaty appointed the following to comprise the investigating committee:

J. G. "Jack" Pew, Dallas, Sun Oil Company, chairman.

Capt. J. F. Lucey, Dallas, president Lucey Petroleum Company, and head of the oil committee for the East Texas Chamber of Commerce.

Col. Louis S. Davidson, commander of the National Guard on proration duty in the field.

Pew is chairman of the well connection committee, which has been very successful in providing market relief for the owners of hundreds of wells in the field when the latter failed in their efforts to line up pipe line connections.

The investigating committee has prepared forms and a tentative program of procedure to follow in auditing the companies' books, according to Pew, and will start active work next week. Arrangements remain to be made for enlisting the aid of experienced auditors to help in the work, and no funds were made available to the committee to engage the services of the required accountants.

While it is understood that all major pipe line companies have tentatively agreed to submit their records to the investigating committee, it is possible that one or more companies may be reluctant to do so. The audit is not compulsory.

Endorsement and recognition of the committee's efforts to ferret out proration violators has been given by Chairman C. V. Terrell of the Texas Railroad Commission, provided activities of the committee do not conflict with laws governing the commission. Mr. Terrell's telegraphic reply to the committee's request for recognition and for an authorization to conduct an investigation follows:

"Your telegram of date concerning recognition of committee named by American Petroleum Institute to investigate operations of pipe line's service in East Texas field, particularly those of the major companies to ascertain if charges that they are moving excess oil are or are not true, received. This commission will welcome any move in the interests of tracing and penalizing violation of its orders and placing responsibility where it belongs and will be glad to receive, consider and it is deemed advisable to publish the committee's report, and to that extent is glad to give recognition to the committee. In this connection, however, you will recall that Section 18, House Bill 25, provides that the commission shall not rely upon outside agencies to enforce conservation laws, and while we do not want to place any reservations on our approval of your committee's efforts, we must respect this statutory requirement, always with the assurance of our appreciation of your efforts and with personal regards."

Owners of independent pipe line systems in the field may also be visited by the investigating committee, but it is known that some of the group would register opposition, based on the fact that they have attempted court injunctions to prevent duly authorized agents of the State from conducting similar audits for the purpose of locating oil produced in violation of proration.

East Texas Wells Without Line Connections Reduced

Dallas, Texas.—The number of completed oil wells in the East Texas field lacking pipe line connections is at the lowest level reached in several months. This favorable condition was revealed at the regular semi-monthly meeting of the field's well connection committee held here August 4 when only 30 well connections had been applied for. However, the committee developed from scout reports and the applications on file that a total of 51 wells were in need of connections. The committee succeeded in assigning pipe line connections for 27 of the total, and will endeavor to place the remainder in advance of the next meeting, according to Jack Pew, chairman.

Bi-monthly reductions in the allowable production of wells in the field by the Texas Railroad Commission has prevented the total output of the field from climbing out of proportion to the prevailing market demand in the face of a large quota of completions each day. This arrangement has enabled the well connection committee to provide hundreds of new completions with market relief, otherwise the purchasing companies would not readily absorb added connections.

Beginning 7 a.m. August 1 the well allowable was cut from 46 to 44 barrels daily. The gross earning power of a well observing proration and receiving the 98-cent posted price is $43.12 daily, or $37.73 daily with the usual one-eighth royalty interest deducted.

Tyler, Texas. — Stanolind Oil & Gas Company is withdrawing as a general purchaser of crude in the East Texas field, having arranged to surrender connections involving about 3000 barrels of oil daily to Humble Oil & Refining Company. The former will continue to absorb the bulk of the production from its own leases in the field.

Stanolind Oil & Gas Company has used the facilities of Humble Pipe Line Company on a common carrier basis in gathering the bulk of its takings from the field while the entire amount has been transported by the latter to Mexia where deliveries are made to Stanolind Pipe Line Company.

Summary of United States Drilling and Production, July, 1932

State—	Month of July, 1932 — Completions	Oil wells	Gas wells	Failures	Initial Production oil	gas*	Total oil production†	Cumulative, January through July, 1932 — Completions	Oil wells	Gas wells	Failures	Initial production oil	gas*	Total oil production†
Oklahoma	71	47	4	20	32,774	166¼	12,923,650	516	280	66	170	409,439	1082¾	90,794,850
Kansas	58	41	3	14	22,505	11½	2,985,760	283	182	20	81	102,221	291½	20,840,800
California	41	27	2	12	29,300	73	14,540,900	160	116	6	38	87,260	126	105,808,300
Texas, outside Gulf Coast	853	712	15	126	4,569,818	141¾	23,520,390	4779	3993	91	695	28,499,757	1386¾	158,972,240
Gulf Coast	49	27	1	21	23,236	80	4,639,950	333	173	6	154	128,280	127	31,149,450
North Louisiana	26	9	2	15	2,985	17¼	917,450	140	45	18	77	17,805	151	6,241,275
Arkansas	3	..	..	3	....	..	1,054,600	23	2	..	21	335	..	7,279,150
Rocky Mountain States	11	8	..	3	16,513	..	2,541,700	73	45	8	20	112,149	42	17,832,510
Eastern States	174	98	39	37	4,941	403¼	3,797,950	1468	675	427	366	51,708	1200¾	25,934,600
Total	1286	969	66	251	4,702,072	530½	66,922,350	7775	5911	642	1622	29,408,954	4407¾	464,853,175

*Millions of cubic feet.
†Preliminary, subject to revision.

Production *and* Drilling *Drop Slightly* During July

JACK LOGAN
Staff Representative

It has been almost two years since a Texas wildcatter, drilling in territory that was not generally considered promising, completed the discovery well of the East Texas field. So important was the "strike," in reality, that the field which had been found has largely dominated the oil business ever since, dwarfing other fields in market influence and overshadowing them in field activity and production.

During July, 1932, with completion of the discovery well almost two years in the background, the East Texas field continued to maintain its dominant, unique position in the matter of drilling activity in the United States, even though it showed a decline from the drilling peak of its history set during the previous month.

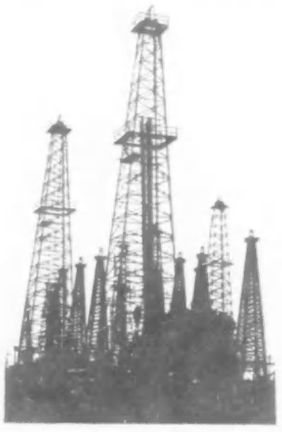
The continued importance of the East Texas field in July was indicated by the fact that during that period it furnished almost one half of the total number of wells completed in the United States, and the big field supplied 60 per cent of all the new oil wells.

As in June, field activity in East Texas was greatly encouraged during July by warm, dry weather, which made roads good, facilitated transportation, and contributed to generally favorable drilling conditions.

The slight decline which occurred in field activity in that area, seems to indicate, nevertheless, that the drilling peak there has been reached and passed, and that henceforth there will be further declines—unless the proration is lifted and operators are catapulted into a wild drilling campaign in a concerted scramble to share in what is left of the flowing life of the field. There has been no weakening of the proration program. In fact, proration in the field seems stronger now than ever before, following a federal court ruling late in July sustaining the railroad commission's proration efforts.

Under the plan which the commission is using, total production in East Texas is held to 325,000 barrels daily, that amount being prorated equally among all wells in the field. With new wells coming in daily, however, it is necessary to make provision for them, and the commission therefore makes semi-monthly downward revisions in the per-well daily allowable production. For the half-month beginning at the middle of July, with about 7000 completed wells in the field, the daily quota was cut from 50 to 46 barrels daily. Continued drilling of new wells will similarly cut the allowance. Those reductions are naturally a deterrent to field activity, and they had begun to affect drilling appreciably during July. If continued during August and succeeding months they will likely make themselves felt even more in the drilling records.

While East Texas drilling had declined in July from the June peak, completions numbered 591, an average of almost 20 new wells being finished daily. During June there had been 670 completions. July completions included 585 oil wells, whereas those of June included 660.



The United States as a whole during July registered a relatively high amount of field activity — high as based upon the standards of the past two years. While the 1286 total completions represented a decline from the 1355 of June, they were still above the 1175 of May. These figures include unproductive as well as productive tests.

From the standpoint of oil-producing wells, the number completed in the United States in July, aggregating 969, was less than for June, when 1007 were brought in, but one must then go back two years to find in the records so many new oil wells completed within a month; in July, 1930, there were 1167.

Initial Production

Due to the lowered number of new oil wells in East Texas, there was a decline there in amount of reserves built up during July, the total of initial production from new producers in the field declining to 4,526,510 barrels from the June total of 5,778,775 barrels, but higher than the May total of 4,508,425 barrels. For the whole United States initial production in July was 4,702,072 barrels, against 5,925,294 barrels in June and 4,690,077 barrels in May.

While the East Texas field experienced a decline in drilling during July as compared with June, other sections of the state showed varying trends, several likewise declining but others increasing. The Texas as well as the Louisiana portion of the Gulf Coast region showed fewer completions. North Texas and the Texas Panhandle likewise experienced slightly less activity in July than June. But South Texas, which was on the verge of a major exploration campaign when the East Texas field appeared on the scene and monopolized attention, is now coming into its own, completions there in July setting a high record for the year by numbering 73, as compared with 62 in June, and only 41 in April. West Central Texas likewise set a high mark for 1932 by furnishing 55 completions in July, against 35 in June and

a 1932 low of 13 in January. Callahan and Shackelford Counties in that district were particularly active, with 18 and 12 completions, respectively. West Texas likewise exhibited increased activity and established a 1932 peak of drilling in July through supplying 29 completions as compared with 17 in June.

California set a record for this year by furnishing 41 completions as compared with 12 in June. The previous 1932 peak had been 27 completions in April. The Kansas total of completions in July, numbering 58, likewise represented a peak for the year, comparing with 48 in June, previous 1932 peak.

Some Areas Show Decreased Activity

Some areas, on the other hand, experienced declines in field work during July. Oklahoma, for example, had only 71 completions in July as against 85 in June. The Oklahoma City field furnished 10 completions in July as compared with 17 in June.

North Louisiana, Arkansas, and the Rocky Mountain states experienced slight declines in field work, but the Eastern States showed a more pronounced curtailment of activity, completions in the latter numbering 174 in July as compared with 196 in June.

Production Declines Slightly

Along with the slight decline in drilling activity in July for the United States as a whole there was also a small decrease in average daily production, even though the 31 days of July gave that month a slightly higher total amount of production than that produced during the 30 days of June.

During July total crude oil output was 66,922,350 barrels, or an average of 2,158,785 barrels daily, whereas the June output of 65,022,600 barrels represented a daily average of 2,167,753 barrels, the July average therefore being 8968 barrels lower than June.

Analyzed by states, the production figures for July show that the net decline was brought about despite an increase in Texas, attributed largely to the East Texas field; the Texas rise having been more than offset by an important contraction of output in Oklahoma, further curtailment in California, and a fair drop in the Eastern States.

The Gulf Coast region experienced a slight decrease in daily output for July as compared with June, but Texas outside the salt dome region produced during July at the average rate of 758,722 barrels whereas the June output had been only 747,760 barrels daily.

Oklahoma maintained a daily average crude oil production of only 416,892 barrels in July as against 432,266 barrels in June; California 469,061 barrels daily in July against 473,643 barrels in June; and the Eastern States 122,192 barrels daily in July as compared with 124,640 barrels in June.

East Texas Passes *All Other Fields in State* Despite Handicap

JACK LOGAN
Staff Representative

DESPITE the fact that it has been under strict proration regulations during all but a few weeks since attaining major proportions, the East Texas field, discovered less than two years ago, has established an impressive production record.

During that brief period, representing only the infancy of its potential productive life, the field has produced more oil than any other field in Texas. It has done that even though Texas is a great oil-producing state, comprising a vast domain, and including old and young fields of outstanding importance: Spindle Top, Humble, Powell, Luling, Burkburnett, Yates, Hendrick. Some of those have been giving up oil almost from the outset of the present century, and all have been producing more than five years.

But East Texas, overshadowing those prolific fields by reason of its magnitude, caught up with them in an almost incredible, meteoric flash, and has left them behind. By the end of the week ending July 19, 1932, the field with only a little over 600 days of regular production, had produced 173,226,188 barrels of oil.

Among other Texas fields the most prolific has been Hendrick in Winkler County, West Texas. By July 1, 1932, it had to its credit (in round numbers) 158,000,000 barrels of oil recovery. Yates field, Pecos County, West Texas, at the same time had nearly 148,000,000 barrels. Other leading Texas fields and their cumulative production included Corsicana-Powell, 124,000,000 barrels, Spindle Top, 117,000,000 barrels, and Humble, 114,000,000 barrels.

The total of over 170,000,000 barrels for East Texas represents average production of approximately 285,000 barrels daily for the 600 days involved, that general average being considerably less than the 325,000 barrels allowed the field as a maximum by the Texas Railroad Commission since the early part of this year. The difference is accounted for by the fact that although the field began producing regularly in early November, 1930, it was not until the following May that enough wells had been completed to run production as high as 300,000 barrels daily. Furthermore, the field was completely shut in under martial law for 19 days in late August and early September, 1931, due to an alarming expansion of production.

In connection with that shut-down and the excessive production which was responsible for declaration of martial law, incidentally, it is of interest to investigate the facts and figures as to the actual amount of excessive production which took place—the excess above the quota allowed the field since then under proration.

It is found upon checking into the production history of the field that production did not mount materially above 350,000 barrels daily until after July 1, 1931, having been held down until then first by limited number of completed wells and later by voluntary curtailment by the operators.

Passes Million

Beginning with the first week in July, however, production steadily increased,

Proration Allowances in East Texas

Following complete shut-down of production under martial law from August 17, 1931, through September 4, 1931, proration has been in effect, with all wells given equal daily allowances, although the per-well daily quota has been reduced repeatedly, as shown in the table below.

Period Beginning	Barrels Daily Per Well*
September 5, 1931	225
September 21	185
October 13	165
October 29	150
November 7	125
December 11	100
Febraury 5, 1932	75
March 16	72
April 1	71
April 16	67
May 1	61
May 16	59
June 1	54
June 16	51
July 1	50
July 16	46

*Railroad Commission assumed leadership in proration following military shut-down, and set per-well quota at 225 barrels daily, subsequently reducing allowance to 185 barrels and then to 165 barrels. On October 13 when latter quota was scheduled to go into effect commission was enjoined in federal court from prorating wells of a group of East Texas operators. Governor R. S. Sterling of Texas on that same date took proration out of hands of commission, declaring full martial law control and continuing the 165-barrel allowable of the commission. Further reductions which followed were made by the governor until he had reduced the per-well quota to 75 barrels daily. In meantime railroad commission in February, 1932, held hearing of East Texas operators, and effective February 25 again assumed leadership in fixing proration allowances, adopting the 75-barrel quota of the governor temporarily, but cutting it to 72 barrels effective March 16. Since then the commission has continued to take the initiative in the proration program.

exceeding 500,000 barrels daily shortly after the middle of the month, and jumping above 750,000 barrels daily before the middle of August. It had ranged above 1,000,000 barrels daily for several days when the martial law shut-down was placed in effect on the morning of August 17, 1931. Soldiers kept the clamp upon the field for 19 days, orderly production being instituted September 5.

While production first rose above 350,000 barrels the first week of July, and thereafter reached alarming proportions, the complete shut-down which followed tended to compensate for the exceptionally high production. Thus during the period July 2 through September 9, embracing the whole period of the field's "excessive" production and the succeeding shut-down, a space of 70 days, total production amounted to somewhat over 30,000,000 barrels—an average output for the period of 430,000 barrels daily. That figure represents an "overage" (for 70 days) of approximately one-third above the 325,000 barrels now allowed in the field under proration.

Summing up, it is seen that with the exception of a relatively short period of "overproduction," which was largely compensated by a complete shutting in of all wells for 2½ weeks, East Texas has been consistently held under control throughout practically its entire history.

That rigid program of restriction must of course be recognized in commenting upon the remarkable production history which has been made by the field. It has produced the 170,000,000 barrels which stand to its credit in spite of a clearly demonstrated capacity to produce much more. Even at this date, with the second anniversary of the discovery of the field approaching, and with approximately 7000 producing wells in the field, all but about 200 are still flowing naturally, with pressures holding up to an extent gratifying to the operators. It is anticipated that unless the proration allowance for the field is increased most of the wells may continue to flow for two or three years more.

Production History of East Texas Field*

Rusk, Smith, Cherokee, Upshur and Gregg Counties

Sabine River is taken as boundary between Longview and Kilgore districts, and the boundary between Kilgore and Joiner districts is a line extending due east from center of town of Overton.

	Joiner		Kilgore		Longview		Total East Texas		
Week Ending:	No. Wells	Av. Daily Prod.	No. Wells	Av. Daily Prod.	No. Wells	Av. Daily Prod.	No. Wells	Av. Daily Prod.	Weekly Prod. Barrels
November 12, 1930	1	185	.....	.....	.....	.....	1	185	1,295
December 31	4	300	.....	.....	.....	.....	4	300	2,100
Total production 1930	.....	.....	.....	.....	.....	.....	.....	.....	21,952
January 7, 1931	5	501	.....	.....	.....	.....	5	501	3,507
February 4	10	7,204	.....	.....	1	158	11	7,362	51,534
March 4	27	29,116	6	22,343	1	4,578	34	56,037	392,259
April 1	84	51,486	30	68,186	11	24,992	125	144,664	1,012,648
May 6	172	95,767	171	120,885	46	52,250	389	268,902	1,882,314
June 3	281	119,188	311	165,576	111	66,712	703	351,476	2,460,332
July 1	413	112,351	457	144,655	187	94,951	957	351,957	2,463,699
August 5	560	230,626	603	275,726	305	147,884	1,468	654,236	4,579,652
August 12	601	269,602	645	296,278	332	172,155	1,578	738,035	5,166,245
August 19	622	305,647	668	326,281	354	216,470	1,644	†848,398	5,938,786
August 26	.....	.....	.....	.....	.....	.....	.....	.....	**
September 2	.....	.....	.....	.....	.....	.....	.....	.....	**
September 9	705	60,342	738	69,715	436	41,438	1,879	171,495	1,200,465
October 6	829	143,501	856	155,482	589	104,901	2,274	403,884	2,827,188
November 3	981	145,049	975	148,959	841	125,433	2,797	419,441	2,936,087
December 1	1,117	135,320	1,082	133,465	1,092	133,448	3,291	402,233	2,815,631
Total production 1931	.....	.....	.....	.....	.....	.....	.....	.....	106,505,354
January 5, 1932	1,230	110,818	1,210	108,129	1,278	110,580	3,718	329,527	2,306,689
January 12	1,268	112,086	1,210	108,667	1,304	112,368	3,782	333,121	2,331,847
January 19	1,280	114,326	1,227	106,760	1,347	111,695	3,854	332,781	2,329,467
January 26	1,306	116,819	1,251	110,155	1,377	118,376	3,934	345,350	2,417,450
February 2	1,328	116,234	1,263	110,457	1,412	122,559	4,003	349,250	2,444,750
February 9	1,358	108,669	1,289	103,501	1,444	114,951	4,091	327,121	2,289,847
February 16	1,391	93,812	1,321	87,048	1,482	98,173	4,194	279,033	1,953,231
February 23	1,401	100,036	1,334	96,658	1,511	108,077	4,246	304,771	2,133,397
March 1	1,426	101,685	1,354	97,765	1,564	110,469	4,344	309,919	2,169,433
March 8	1,445	106,563	1,367	100,204	1,598	116,845	4,410	323,612	2,265,284
March 15	1,463	107,250	1,390	102,211	1,632	119,873	4,485	329,334	2,305,338
March 22	1,485	105,910	1,420	102,159	1,664	119,677	4,569	327,746	2,294,222
March 29	1,506	106,518	1,448	103,179	1,705	121,354	4,659	331,051	2,317,357
April 5	1,534	107,990	1,486	105,285	1,759	124,290	4,779	337,565	2,362,955
April 12	1,565	109,521	1,521	107,354	1,799	126,610	4,885	343,485	2,404,395
April 19	1,595	109,960	1,559	107,914	1,856	128,480	5,010	346,354	2,424,478
April 26	1,634	106,422	1,592	103,755	1,910	124,717	5,136	334,894	2,344,258
May 3	1,682	108,745	1,631	105,936	1,969	127,854	5,282	342,535	2,397,745
May 10	1,733	105,584	1,673	102,289	2,036	124,010	5,442	331,883	2,323,181
May 17	1,786	107,573	1,702	103,459	2,083	127,066	5,571	338,098	2,366,686
May 24	1,835	107,281	1,765	102,300	2,136	124,700	5,736	334,281	2,339,967
May 31	1,893	111,314	1,815	109,418	2,211	129,268	5,919	350,000	2,450,000
June 7	1,930	105,208	1,845	100,981	2,277	124,173	6,052	330,362	2,312,534
June 14	1,970	105,117	1,906	101,446	2,339	124,486	6,215	331,049	2,317,343
June 21	2,021	104,096	1,964	102,661	2,394	125,066	6,379	331,823	2,322,761
June 28	2,069	104,116	2,009	101,342	2,457	123,462	6,535	328,920	2,300,440
Total production 1932 through June 30	.....	.....	.....	.....	.....	.....	.....	.....	60,237,995
July 5	2,115	106,223	2,050	103,269	2,521	126,505	6,686	335,997	2,351,979
July 12	2,150	106,491	2,071	103,299	2,584	127,630	6,805	337,420	2,361,940
July 19	2,198	111,119	2,115	104,518	2,656	129,929	6,969	345,566	2,418,962
Total production July 1-19, inclusive	.....	.....	.....	.....	.....	.....	.....	.....	6,460,887
Total production in 1932 through July 19	.....	.....	.....	.....	.....	.....	.....	.....	66,698,882
Total production from discovery of field through July 19, 1932	.....	.....	.....	.....	.....	.....	.....	.....	173,226,188

*For all weekly figures during 1930 and 1931 see THE OIL WEEKLY, February 26, 1932, page 53.

†Although this figure represents daily average for seven-day period, most of the output for the week was produced in first five days, martial law shutdown of field going into effect on morning of August 17, 1931.

**Field was shut down under military orders during period August 17 to September 4, inclusive.

Cranfill-Reynolds Makes Third East Texas Sale

Houston, Texas.—Cranfill-Reynolds Company, Houston, has consummated its third major sale of interests in producing properties in the East Texas oil field within the past 12 months, realizing a greater sum of money for these properties than any other company that has elected to dispose of properties in the field. The latest sale involves the transfer of an undivided one-quarter working interest held jointly with Sun Oil Company on eight leases, aggregating about 1060 acres, with 38 flowing wells, to the Texas Seaboard Oil Company for $500,000 cash. Including this deal the Cranfill-Reynolds Company has realized approximately $4,450,000 from its holdings in the field.

The first important sale was made in July, 1931, when Atlantic Oil Producing Company paid about $1,350,000 for leases on 1066 acres, and last January the latter company paid $2,600,000 for 1400 acres and 15 wells held by Cranfill-Reynolds Company in the north half of the field.

Texas Seaboard Oil Company is a subsidary of the Seaboard Oil Company of New York City, with an operating office on the 20th floor of the Tower Petroleum building, Dallas. R. S. McFarland, former official for the Twin State Oil Company, is vice-president and in charge of the Dallas office. Until recently the Texas Seaboard Oil Company held a small production in Brown County, Texas, but this was disposed of. Sun Oil Company will continue to operate the East Texas properties involved in the company's purchase from Cranfill-Reynolds Company.

MEN IN THE INDUSTRY'S NEWS

R. B. KELLY

Production Engineer, The Pure Oil Company has recently been promoted to the position of assistant to B. S. SoRelle, division manager with headquarters at Fort Worth.

Mr. Kelly has long been active in the work of the Southwestern District, Division of Production of the American Petroleum Institute, having served as chairman of the District and frequently contributing to its program of technical papers.

Mr. Kelly's work as production engineer for Pure Oil Company at Fort Worth has been taken over by H. B. Thomson, production engineer.

R. B. KELLY

ACTING on behalf of the directors of the Oil Producers Sales Agency of California, President Ralph B. Lloyd on July 27 presented a wrist watch to Neal H. Anderson, retiring oil umpire of California, "as a token of appreciation of the genuine sportsmanship which has characterized your every act while performing the duties of an umpire, during one of the most trying periods in the history of the oil industry in California."

C. A. FULMER, representing Wheeling Bronze Casting Company, Wheeling, West Virginia, was a Tulsa visitor during the past week. Mr. Fulmer formerly was district representative for American Metal Products Company with headquarters in Tulsa.

HALL EDWARDS, formerly head of the land and scouting departments for Sunray Oil Company, has returned from Oklahoma City where he has been looking over the new lease and royalty play brought about through the spudding of Sinclair Prairie et al's wildcat test two miles south of Arcadia.

GENE BAIRD, worker on Limestone Oil & Gas Company's Walker 2, in the Wewoka-Holdenville area, did a sensational dive from near the top of the derrick and landed face first in the slush pit more than 80 feet below. The dive was not for exhibition purposes but due to a sudden gust of wind which blew him from his perch on the fourble board. The mud saved him from serious injury but he was almost smothered before it could be scraped from his eyes, nose, and mouth.

RALPH W. HOWE, vice president and general manager Atlantic Pipe Line Company, Dallas, Texas, is including the Olympic games on his vacation trip to California, and will not return until late in August.

HARRY F. SINCLAIR, chairman of the board, and H. R. Gallagher, president, Consolidated Oil Corporation, are in Los Angeles, in connection with the taking over of Richfield Oil Company and Rio Grande Oil Company.

W-K-M COMPANY, INC., Houston, Texas, announces appointment of A. S. Crutcher, who recently brought back to America one of the largest single orders for special pipe line equipment ever placed in this country, as sales manager of its pipe line equipment department, with headquarters at Houston. J. D. Cummings, inventor of much W-K-M pipe line equipment, will collaborate with Mr. Crutcher in his sales work.

Since 1926, Mr. Crutcher has been identified with the pipe line construction equipment industry. He is credited with many substantial contributions to the development of new machines and tools, and has assisted in perfecting the design of many others.

H. E HAMILTON, who is well known in the oil supply and manufacturing business, due to his former connections with The Oil Well Supply Company and National Transit Pump & Machine Company, has been appointed district sales manager for the Titusville Iron Works Company, Titusville, Pennsylvania, and will be in charge of sales for that company in the states of Texas and New Mexico. He will maintain his offices at 504 Holmes Building, Fort Worth, Texas.

R. L. GAY, North Louisiana independent oil operator, left during the last week for Los Angeles and Burbank, California, for his vacation. He will attend the Olympic games while away. He was accompanied by 10 young people from Louisiana, including the son and daughter of Gov. and Mrs. O. K. Allen of Louisiana, and a daughter of Senator and Mrs. Huey P. Long.

CHARLES POWER, Houston and Gulf Coast district scout of United Gas Company, is expected to return to Houston next week from Laredo, where he has been relieving the Laredo district scout.

TOM GRAHAM, former head land man for Houston Oil Company at Houston, is drilling a wildcat in Southern Louisiana on his own hook.

Curtailment *of Oil Production* *No New Thing* In California

JOSEPH JENSEN

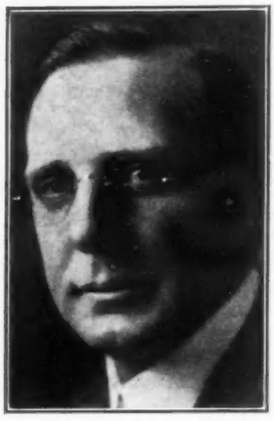
CURTAILMENT of oil in California began in 1922 and 1923 when certain of the major companies in California completely shut down some pumping properties. Efforts of this kind were generally carried on without coordination by individual companies until 1928. From May to August of 1923, oil production in the Los Angeles basin was curtailed because of lack of pipe line outlets. This work was handled by a small committee of executives and engineers of some of the pipe line companies without any established method such as is had at the present time. Not all of the major companies participated in this curtailment and the effort was not well organized. The problem then was principally to move the oil. The crisis passed in September of 1923. From then on the major companies, each on its own initiative, shut in additional production. At Dominguez, in 1924, Shell, Union and Associated agreed to limit drilling to a 400-foot zone for one year. In the summer of 1925, operators at Inglewood agreed to limit developments to a 1300-foot zone during the 1925 drilling campaign. In the summer of 1927, the Ventura operators cut back their production one-third and left it thus for 90 days. Drilling in this field has always been at a slow and conservative rate.

In the spring of 1928, the major companies of the state held their first conference to curtail by cooperative action. Heavy oil was shut in at Coalinga and in the Sunset-Midway field. While some of the Coalinga wells have recently been opened up, practically all of the wells shut down in the Sunset-Midway field in 1928 are still shut in.

Kettleman Hills

Few people realize or give credit to the very fine piece of curtailment work done in the Kettleman Hills through the cooperative action of the federal government and the operators of that field. Constituting the largest single tract of oil land ever found in California, this field could have duplicated within 1½ years after its discovery in 1928 the performance of Signal Hill and Santa Fe Springs.

By the agreement of July 25, 1929, all holders of government permits in the North Dome of the Kettleman Hills agreed with each other and the Secretary of the Interior to suspend drilling activities until July 1, 1931, subject only to the drilling of their wells to a finishing depth at the top of the Temblor formation so as to secure a discovery. With such an arrangement, the Standard Oil Company of California agreed to cooperate. Only the four wells at the discovery corner were placed on production and up to one fourth of their output was divided among the owners of wells that made discovery who refrained from placing such wells on production. The field remained in this condition until April 1, 1931, when the Kettleman North Dome agreement went into effect for the unified operation of all of the government land and a number of parcels of privately owned land in the Kettleman Hills.



JOSEPH JENSEN

Chief Petroleum Engineer, Associated Oil Company, who presented the accompanying paper before the Los Angeles Meeting of the American Institute of Mining and Metallurgical Engineers, July 28, 1932

The Kettleman North Dome Association and the Standard regulated their production on an acreage basis totaling approximately 45,000 barrels per day. An additional 15,000 barrels per day has been allotted to wells of other operators in the field, giving this largest tract of oil land in the state an allowable production of 60,000 barrels per day even though its potential is estimated at more than four times that amount.

Los Angeles Basin

The first effort at cooperative oil curtailment by all operators in certain Los Angeles basin fields was made in the spring of 1929. A committee of engineers assisted in the organizing of methods in the oil umpire's office. Allotments were made and left to stand, with the result that declining potentials soon made curtailment ineffective.

The production situation grew worse so that in the fall of 1929, a new and stronger effort at curtailment was made. This was first carried on under two umpires. Their offices were consolidated in the summer of 1931. In March and April of 1930, curtailment was extended to all fields in the state.

In the beginning, the view was taken that a barrel of oil is a barrel of oil and each barrel must be proportionately curtailed. In a single oil field, the ability to produce when there is no restriction, is the measure of what is produced; consequently, the potential or the ability to produce was considered as the proper basis from which to curtail. So long as the price of oil remained high and the operators in the flush fields bore the curtailment, the result of proportional curtailment of potential was merely to reduce earnings and profits. When it later became necessary to extend curtailment to older fields, new problems developed, and departures from the system of curtailment by percentage of potential forced themselves upon the industry.

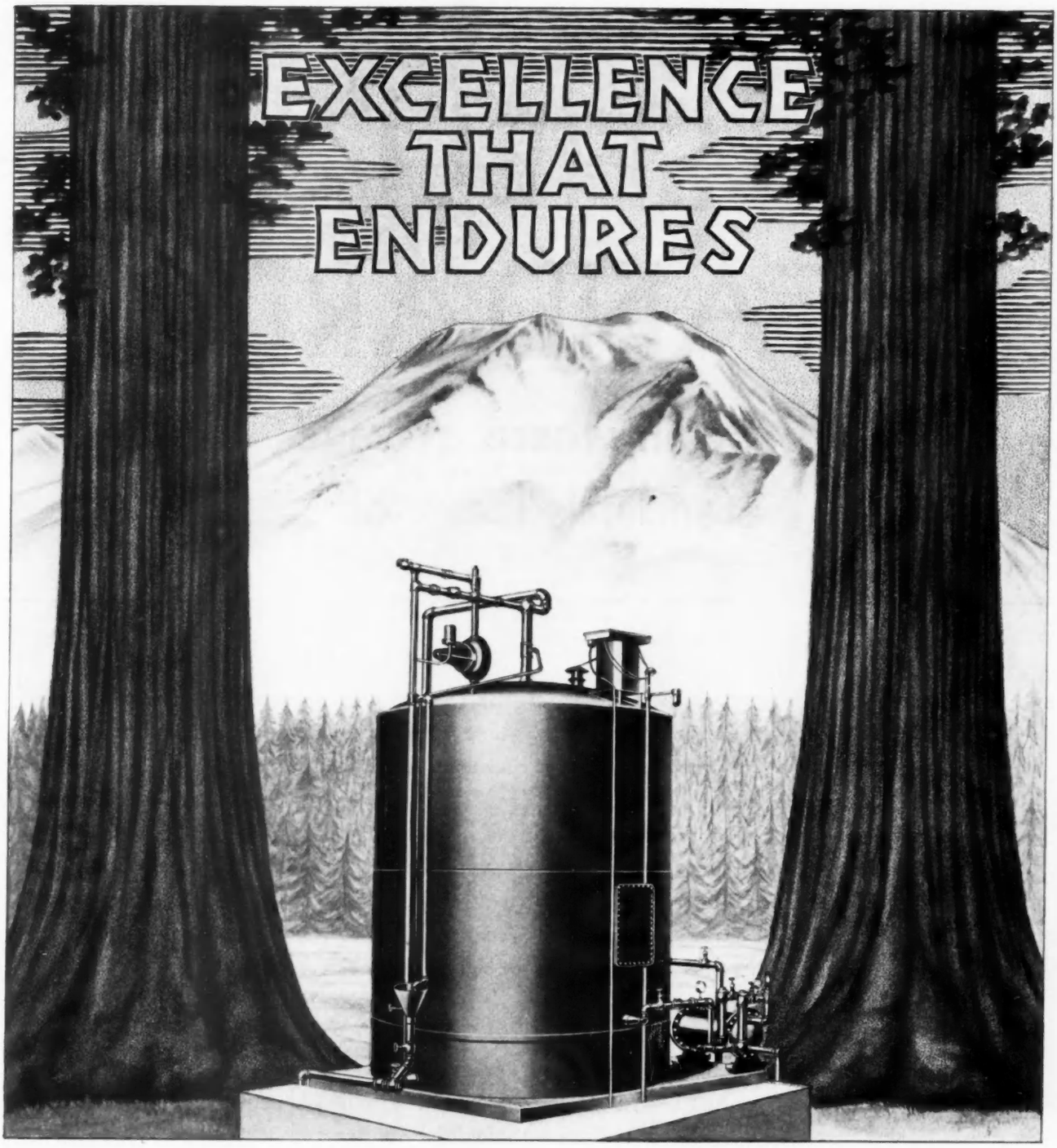
When Decline Started

In the period of flush production, it was possible to group all fields of the Los Angeles basin and apply a uniform percentage cut to them. As time passed however, the rate of decline in the fields was different. The custom developed of setting aside a fixed quantity of oil for each field to be divided among the operators. As few new wells were completed in the fields, no important new production demanded participation in the field allotment at the expense of quotas of other operators; hence no difficulties arose. The decline in potential in such cases was greater than the new potential. In fields capable of much flush production, such method would still be confronted by problems that were prevalent in 1929 and 1930, and therefore cannot be introduced.

In the old fields, it was recognized that the small well when curtailed, was unable to pay for its operation. Therefore the small operator demanded that his well be protected and his right to produce be preserved so he would not be forced to operate at a loss. The first departure was to classify the operators in groups in the Midway field and regulate the percentage of cut according to their total production.

Declining production and lower prices led to the introduction of what is now known as graduated curtailment. By graduated curtailment, a definite quota of oil is given to all wells in a field. The remainder of the allotment of the field is divided among the wells according to their proportion of the remainder of the potential. This system has within the past few months been extended to most of the fields in which there is no flush production

(*Continued on page 46*)



PETRECO

REG. U.S. PAT. OFF.

The Electrical Process of Dehydrating Crude Oil Emulsions; first used commercially in 1909

(Fully Covered by Process and Apparatus Patents)

PETROLEUM RECTIFYING CO. of CALIFORNIA, LOS ANGELES—Branch: HOUSTON, TEXAS

SHELL STANDARDS

begin where average standards leave off

EACH Shell refinery commences its work by meeting the requirements set up by the United States Government and the standards generally accepted by the industry. But Shell owes its present position among American oil companies to a *second* set of specifications.

A self-imposed set of highly rigid tests. And meeting these higher-than-minimum standards is the most important task in every Shell refinery.

Shell gas *must* be right. Whenever, wherever purchased, it must be the best possible gas for the American motorist. It must meet the requirements imposed by weather, altitude, and driving conditions in his particular section of the United States.

Scientific study of local variations in climate, altitude and operating conditions is but one of the activities of the Shell laboratories.

Shell chemists have perfected a precision control that safeguards the quality of *all* Shell products. Not only gasoline, but kerosene, lubricating and fuel oils . . . Every item in Shell's comprehensive line of petroleum products does its job, not adequately but handsomely, and does it under the particular conditions imposed by the user.

SHELL CRUDE OIL PRODUCTION

Arkansas
California
Kansas
Louisiana
New Mexico
Oklahoma
Texas

SHELL REFINERIES

Arkansas City, Kan.
Coalinga, Calif.
Dominguez, Calif.
East Chicago, Ind.
Houston, Texas
Martinez, Calif.
Norco, Louisiana
Wilmington, Calif.
Wood River, Ill.

MARKETS — STATISTICS

Situation Unchanged Despite Curtailed Production and Consumption Drop; Withdrawals in Kansas-Oklahoma.

Production Up; Crude and Refined Markets Steady

ESTIMATES of crude oil production in the United States for the week ending August 6 indicate a rise of 12,470 barrels. As against a total of 2,152,470 barrels this change is trivial and in keeping with other changes which took place in the market situation. Reports from all sectors are that both crude and refined markets remained unchanged—the crude market no better despite continued rigid production control, and refined markets no worse although consumption continues off. The latter situation because refiners are pacing their operations with shipments with the idea of lowering stocks of gasoline at their plants. The refiner now is looking forward to a better demand for fuel oil to winter specifications which should give an element of strength in that quarter.

In Oklahoma production was up 37,000 barrels when Oklahoma City came back with a 31,000-barrel gain and Seminole showed an increase. Texas on the other hand had a decrease of around 18,000 barrels daily, most of which came from the periodic adjustment to lower well allowables in East Texas. The Texas Gulf Coast was down about 13,000 barrels, but East Central and South Texas were up to partially offset these losses.

California was down 4000 barrels to 466,000 barrels daily, or 10,000 barrels below its set top.

What the general condition of business is doing to gasoline consumption is further shown in the recently released report of consumption of motor fuel for May. Data collected by American Petroleum Institute from tax authorities in the several states indicates that the decline in demand is 9.59 per cent for that month against a year ago, and for the first five months the loss was 4.41 per cent, indicating the possibility that weather conditions were so favorable in the later part of the winter as to partially offset the general situation. Consumption of gasoline in May was 43,143,000 gallons and about 300,000 gallons per day less than in April, and over four million gallons less daily than a year ago. It will be noted that current refinery stocks are approximately as many barrels as consumption is gallons, meaning that the supply is about 42 days. Another significant fact about the gasoline situation is that those states which have the higher tax rates are most prominent in the rate of decline while the more rational tax states show increases in some instances.

In view of this adverse consumption situation, refiners are doing well to maintain a spirit of optimism while holding their market steady as to price by rigid control of crude runs to stills. With several weeks left of normally favorable weather for motoring and the spirit of conditions if not actual business improved, there is possibility for better gasoline business, but not enough chance of it to justify any let up in the caution with which refiners are feeling their way. With such conditions, the producer well may be satisfied with his position as it is and continue efforts to hold production down as a bolster for the price.

THE OIL WEEKLY

(Estimated Average Daily Production in Barrels) Week Ending August 6, 1932

District	For Week Ending August 6	July 30
TEXAS—		
Texas Panhandle	52,925	52,780
North and West Central Texas	74,525	74,500
West Texas	174,100	174,450
East Central Texas	65,050	57,200
East Texas Field	330,560	346,600
South Texas	61,235	57,700
Total Texas outside of Gulf Coast	731,395	763,230
Texas Gulf Coast	103,300	116,100
Total Texas	861,695	879,330
OKLAHOMA—		
Oklahoma City	105,260	73,890
Seminole District	138,045	133,000
Other Oklahoma	187,665	187,060
Total Oklahoma	430,960	393,950
KANSAS—		
Ritz-Decker	11,940	13,150
Voshell	6,010	6,250
Other Kansas	75,390	76,320
Total Kansas	93,340	95,720
LOUISIANA—		
North Louisiana	28,975	29,300
Louisiana Gulf Coast	32,175	33,000
Total Louisiana	61,150	62,300
Arkansas	33,675	33,700
CALIFORNIA—		
Long Beach	68,000	60,000
Santa Fe Springs	57,000	58,000
Midway-Sunset	49,000	50,000
Kettleman Hills	61,000	61,000
Other California	235,000	241,000
Total California	466,000	470,000
MOUNTAIN STATES—		
Wyoming	37,200	35,900
Montana	7,700	7,700
Colorado	2,850	2,850
New Mexico	35,900	36,100
Total Rocky Mountain States	83,450	82,550
Eastern States*	122,200	122,450
Total United States	2,152,470	2,140,000

*Includes Michigan.

Oklahoma-Kansas Storage Withdrawals Continue

THE Mid-Continent market apparently was still in the doldrums during the past week when no material changes were reported either in prices or movements. One branch of the market has shown a slight pick up and probably will grow stronger during the next few weeks when jobbers will be stocking for winter demand of low cold test gas oils and distillates. It is reported that major firms were asking 2½ cents for furnace oils and low cold test gas oils seemed to be holding at about 2⅜ cents.

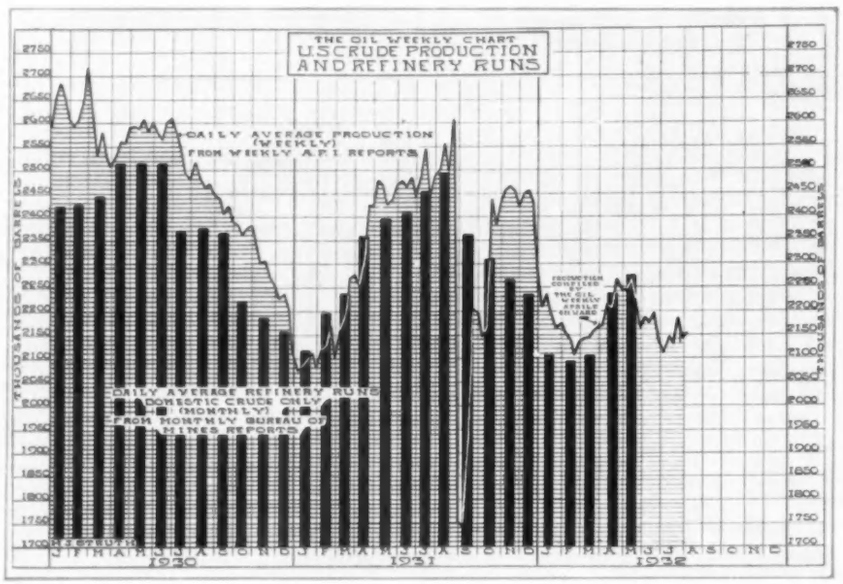
Natural gasolines remained at their former strength with a continuing swing toward increased use of the lower vapor tension grades. Among the stabilized grades 74-80, nine-pound vapor material was bringing about 4⅛ cents with an upward range of one-eighth cent. Distressed conditions in the natural gasoline business are gradually causing many companies to install stabilizing equipment until the lower vapor tension naturals now are cutting in to the motor fuel market at a rate which is alarming to refiners.

Estimated net crude oil movements for the week ending July 26, 1932, in Kansas and Oklahoma changed to 21,000 barrels daily from storage, a decline of only 1000 barrels below the figure for the preceding week. Approximately 95 per cent of this movement is from Oklahoma storage.

California Market Outlook As Good As It Was

THE California market situation continues to hold its own, without any indications which might cause a break. Daily crude production hovers around 468,000 to 470,000 barrels. On July 30, a jump of 5000 barrels in reported production from Elk Hills caused some surprise, but upon investigation it was learned that a stock of cut oil had accumulated, and after treatment, was moved by a pipe line company.

The Long Beach situation has apparently been cured until the "overage" is down to next to nothing; Huntington Beach is still out of line but not alarm-


THE OIL WEEKLY CHART
U.S. CRUDE PRODUCTION AND REFINERY RUNS
DAILY AVERAGE PRODUCTION (WEEKLY) FROM WEEKLY A.P.I. REPORTS
DAILY AVERAGE REFINERY RUNS DOMESTIC CRUDE ONLY (MONTHLY) FROM MONTHLY BUREAU OF MINES REPORTS
THOUSANDS OF BARRELS
1930
1931
1932

ingly so. Various production committees and the umpire's office are still firm of the opinion that production will be held below or around 470,000 barrels a day, against allotment of 476,200 barrels.

Reduced production has removed from the market practically all "free oil" until small refiners, who formerly sold gasoline to small stations at a cut price, are without a crude supply. In only a few localities, service stations are selling gasoline at retail at 12 to 12½ cents against an official price of 13½ cents for major company third grade. One small refiner recently reduced his tank wagon price half a cent, which makes it possible for the lower retail prices. But the lower prices are not widespread.

Drilling in the state is at a low ebb, with much of the activity at Fruitvale, in Kern County, but this crude is not unusually attractive and the wells have low initial. There is no field in the state giving indications that any big drilling campaign will be started in the near future. Present crude production is being absorbed nicely, with crudes and fuels being withdrawn from storage monthly. There have been no important changes in prices for any products.

Asphalt Demand Lower in 1931

PRODUCTION of petroleum asphalt at the refineries of the United States dropped to 2,975,690 short tons in 1931, from 3,223,888 short tons produced in 1930. This is exclusive of road oil. The decrease totaled 248,198 short tons and is attributed to decreased demand for the product, and increased importation of lake asphalt and grahamite, according to annual figures compiled by the Bureau of Mines, Mineral Markets Reports No. M.M.S. 135. During the year 16,732 tons were added to stocks at refineries, bringing total stocks to 304,623 tons.

Of the 2,975,690 short tons of asphalt manufactured at petroleum refineries in 1931, 1,700,946 tons was made from foreign crude oil (chiefly Venezuela, Colombia and Mexico) and 1,274,744 tons from domestic crude oil.

Sales of petroleum asphalt by refineries were 10.7 per cent less in quantity and 28.2 per cent lower in value in 1931 than in 1930. From 3,216,440 short tons, valued at $34,622,032, in 1930, they decreased to 2,873,291 tons, valued at $24,861,339 in 1931. The decline is attributed to decreased construction of first class highways and decline in production of prepared roofing materials.

Fewer Natural Gasoline Plants Have More Capacity

THE number of natural gasoline plants has shown a consistent decline in recent years, while the total capacity has increased steadily, according to Information Circular 6635, now ready for distribution by Section of Publications U. S. Bureau of Mines (no charge). "Natural Gasoline Plants in the United States, as of January 1, 1932," by G. R. Hopkins and E. M. Seeley. The number of completed plants, as determined by this survey was 959. Previous surveys of January 1, 1928, and 1930, shows 1155 and 1035 plants, respectively. Of the total plants on January 1, 1932, 859 were operating and 100 were shut down, compared with 999 operating and 36 shut down on January 1, 1930. The material gain in the number of inoperative plants in the last two years was probably due to the severe decline in prices in 1931. The majority of plants removed from the list in 1930 and 1931 were owned by companies which were engaged solely in the manufacture of natural gasoline.

The total daily capacity of the plants on January 1, 1932, amounted to 11,387,000 gallons, an increase of 871,000 gallons, or eight per cent, in the two years.

During 1931 the average total daily capacity of the operating plants was approximately 10,600,000 gallons, while the average daily production amounted to 4,944,000 gallons, indicating that the plants operated during 1931 at 47 per cent of their capacity, compared with 58 per cent in 1930 and 61 per cent in 1929.

Imports Off; California Eastern Movement Quits

IMPORTS of crude and fuel oil into the United States for the week ending July 30, as compiled by American Petroleum Institute, show a substantial decline, practically all imports entering at New York. Figures for the week and comparisons follow:

	Week Ended July 30	Ended July 23
Crude Oil	211,000	329,000
Fuel Oil	137,000	387,000
Total all oils	348,000	716,000
Daily Average	49,714	102,286
Daily Average Four Weeks Ended	77,750	108,786

No California Movement East

No movement of California gasoline to Eastern United States ports was reported for the week. Tabulation of recent movement follows:

	Week Ended July 30	Ended July 23
California Gasoline to East Coast	.....	190,000
Daily Average	.....	27,143
Daily Average Four Weeks Ended	43,821	50,893

Comparison of Permits Granted For New Wells

State—	For week ending Aug. 5	Total this month	Total this year	Total this date last year	1931 year total
Arkansas	0	0	13	23	34
California	7	7	185	239	342
Louisiana	10	10	295	199	309
Kansas	20	20	391	283	475
Oklahoma	32	32	677	551	842
Texas	221	221	5540	3484	6961
Total	290	290	7101	4779	8963

Crude Runs to Stills, Motor Fuel Stocks, Gas and Fuel Oil Stocks and Cracked Gasoline Production, as compiled by A. P. I. for Week Ended July 30, 1932

(Figures in barrels of 42 gallons)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		MOTOR FUEL STOCKS					Gas and Fuel Oil Stocks	Daily Charging Capacity of Cracking Units			Cracked Production Daily Average
	Potential Rate	Reporting		Daily Average	% Operated	(a) At Refineries	(b) Bulk Terminals	(b) In Transit	(c) Other M.F. Stocks	Total Motor Fuel		Potential Rate	Reporting		
		Total	%										Total	%	
East Coast	633,700	633,700	100.0	450,300	71.1	5,992,000	10,821,000	2,207,000	385,000	19,405,000	8,107,000	261,300	236,300	94.1	94,700
Appalachain	149,600	137,400	91.8	93,000	67.7	1,426,000	529,000	.....	313,000	2,268,000	1,174,000	56,300	54,100	96.1	22,000
Ind., Ill., Ky	436,300	431,500	98.9	288,400	66.8	5,252,000	2,463,000	105,000	225,000	8,045,000	4,363,000	330,400	315,400	95.5	85,600
Okla., Kans., Mo	485,700	435,200	89.6	205,300	47.2	3,396,000	836,000	.....	1,025,000	5,257,000	3,400,000	237,800	219,500	92.3	45,600
Inland Texas	305,700	233,900	76.5	102,700	43.9	1,250,000	28,000	.....	330,000	1,608,000	2,312,000	98,400	88,800	90.2	22,300
Texas Gulf	532,500	531,500	99.8	408,400	76.8	4,701,000	86,000	46,000	325,000	5,158,000	8,441,000	352,400	347,400	98.6	89,800
Louisiana Gulf	147,500	147,500	100.0	99,300	67.3	1,437,000	241,000	.....	32,000	1,710,000	4,697,000	77,000	77,000	100.0	23,900
North La.—Ark	85,600	83,000	97.0	41,600	50.1	122,000	36,000	.....	65,000	223,000	678,000	35,400	35,400	100.0	8,600
Rocky Mountain	160,900	143,800	89.4	41,700	29.0	1,823,000	.....	.....	21,000	1,844,000	621,000	99,900	98,400	98.5	10,600
California	914,500	884,100	96.7	444,600	50.3	12,759,000	.....	.....	2,895,000	15,654,000	98,807,000	190,800	190,800	100.0	55,800
TOTALS WEEK: July 30, 1932	3,852,000	3,661,600	95.1	2,175,300	59.4	38,158,000	15,040,000	2,358,000	5,616,000	61,172,000	132,600,000	1,739,700	1,663,100	95.6	458,900
July 23, 1932	3,852,000	3,661,600	95.1	2,263,400	61.8	39,394,000	15,570,000	1,796,000	5,695,000	62,455,000	132,210,000	1,739,700	1,663,100	95.6	465,100

Below is set out an estimate of total motor fuel stocks on U.S. Bureau of Mines basis for week of July 30, 1932 compared with certain July 1931 Bureau figures.

A. P I. Estimate B. of M. basis Week July 30, 1932 (d)	39,000,000	18,224,000	5,616,000	62,840,000
U. S. B. of M. Motor Fuel Stocks July 1, 1931	41,198,000	14,139,000	4,828,000	60,165,000
U. S. B. of M. Motor Fuel Stocks July 31, 1931	37 151,000	14,494,000	4,620,000	56,265,000

(a) Stocks at refineries, except in California district, which includes stocks of finished gasoline and engine distillate at refineries, at water terminals and at sales distributing stations and any amounts in transit thereto.
(b) By districts, East of California only. In California, bulk terminal and in transit stocks are included under "At Refineries" heading. See note (a).
(c) Estimated. Includes motor fuel in pipe lines and unblended natural gasoline at refineries and plants, also blended M. F. at plants.
(d) Estimated to permit comparison with A. P. I. Economics Report which is on Bureau of Mines basis.

American Company Plans German Drilling Campaign

Hannover, Germany.—The Magdalena Syndicate, New York, acquired several large blocks of leases in Germany during 1931. The holdings include 34,000 acres in Hannover, 18,750 acres in Pomerania, 156,000 acres in Mecklenburg; and the company acquired controlling interest in Norddeutsche Mineraloel A. G. (Nordoel A. G.).

With the latter concern scheduled to carry out the work, a drilling program is planned. Proposed activity also includes enlargement of a refinery at Dollbergen, as well as construction of a new refinery to serve the same territory. Dollbergen is located near the Oelheim dome. In financing the outlined program, the Magdalena Syndicate contemplates spending approximately $1,250,000.

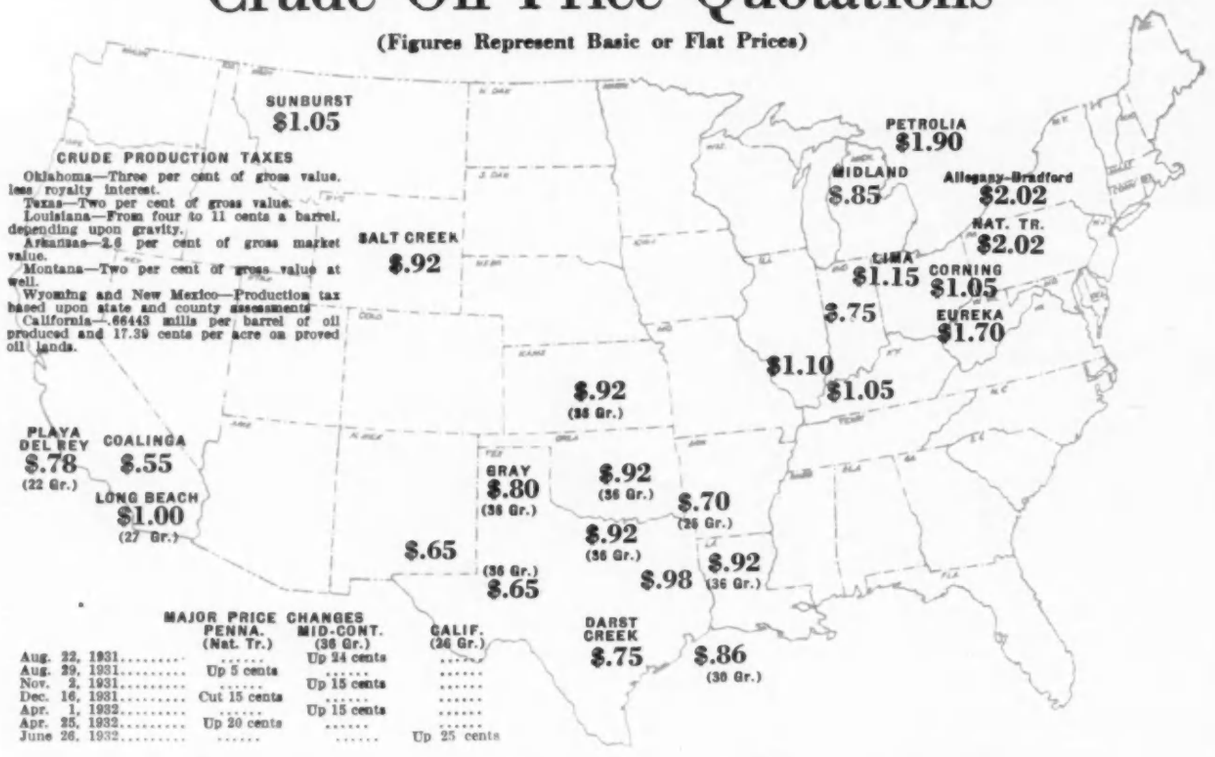
Summary Review of Field Results

State—	Completions	Oil Wells	Gas Wells	Failures	Initial Prod.
Arkansas	0	0	0	0	0
California	3	3	0	0	1,591
Illinois	1	0	0	1	0
Indiana	2	1	1	0	25
Kansas	13	8	0	5	3,462
Kentucky	18	6	4	8	2,145
Louisiana	11	5	0	6	597
Michigan	4	1	1	2	300
Mississippi	1	0	0	1	0
New Mexico	1	0	0	1	0
New York	0	0	0	0	0
Ohio	18	5	7	6	17
Oklahoma	29	16	6	7	9,812
Pennsylvania	1	0	1	0	0
Texas	220	186	2	32	1,136,331
W. Virginia	4	2	1	1	50
Miscellaneous	5	1	1	3	130
Total	331	234	24	73	1,154,460

Pumping wells shown here are small producers of the Deutsche Petroleum A. G. located between Nienhagen and Haenigsen in the Celler Forest, Germany. The wells are several years old.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
Aug. 22, 1931	.....	Up 24 cents	.....
Aug. 29, 1931	Up 5 cents	.....	.....
Nov. 2, 1931	.....	Up 15 cents	.....
Dec. 16, 1931	Cut 15 cents	.....	.....
Apr. 1, 1932	.....	Up 15 cents	.....
Apr. 25, 1932	Up 20 cents	.....	.....
June 26, 1932	.....	.....	Up 25 cents

Official Postings and Differentials *(Revised to August 5, 1932)*

CALIFORNIA: (Effective June 26, 1932).

Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Olinda-Brea Canon, Torrance, and Richfield: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 79 cents; 23 gravity 84 cents; 24 gravity 89 cents; 25-25.9 gravity 93 cents, top posting for Torrance and Richfield; 26-26.9 gravity 97 cents, top price for Seal Beach, Alamitos Heights and Huntington Beach; 27-27.9 gravity $1.00; 28-28.9 gravity $1.03, the top price for Olinda-Brea Canon; 29-29.9 gravity $1.06; and 30-30.9 gravity $1.09, the Signal Hill top posting.

Inglewood: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 71 cents; 21 gravity 77 cents; 22 gravity 82 cents; 23 gravity 87 cents; 24-24.9 gravity 92 cents, the top price.

Playa Del Rey: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 69 cents; 21 gravity 74 cents; 22 gravity 78 cents; 23 gravity 82 cents; 24 gravity 86 cents; 25 gravity 91 cents; 26-26.9 gravity 96 cents, the top price. Field gathering charges of 5 cents a barrel.

Athens, Rosecrans and Dominguez: 24-24.9 gravity 89 cents 25-25.9 gravity 93 cents; 26 gravity 97 cents; and 27-27.9 gravity $1.00 with three cents additional for each degree gravity upward, ending at 32-32.9 gravity $1.15.

Elwood Terrace: 33-33.9 gravity $1.04 and 6 cents more for each additional degree of gravity, ending with 37-37.9 gravity $1.28, all prices f.o.b. ship.

Whittier and LaHabra: 14 to 19.9 gravity 65 cents; 20-20.9 gravity 68 cents; 21 gravity 72 cents; 22 gravity 77 cents; 23 gravity 83 cents; and 24-24.9 gravity 89 cents, the top price.

Montebello: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 67 cents; 22 gravity 70 cents; 23 gravity 73 cents; 24 gravity 76 cents; 25-25.9 gravity 80 cents, the top price.

Coyote Hills: 14 to 20.9 gravity 65 cents; 21-21.9 gravity 66 cents; 22 gravity 70 cents; 23 gravity 76 cents; 24 gravity 81 cents; 25 gravity 86 cents; 26 gravity 90 cents; 27 gravity 94 cents; 28 gravity 98 cents; 29 gravity $1.02; and 30-30.9 gravity, $1.05, the top price.

Santa Fe Springs: 24-24.9 gravity 73 cents; 25 gravity 79 cents; 26 gravity 84 cents; 27 gravity 89 cents; and 28-28.9 gravity 94 cents, with 4-cent differential for each degree of gravity upward to 35-35.9 gravity $1.22.

Newhall, McKittrick and Kern River: 14 to 19.9 gravity 55 cents.

Midway-Sunset, Elk Hills and Buena Vista: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 63 cents; 22 gravity 69 cents; 23 gravity 75 cents; 24 gravity 81 cents; 25-25.9 gravity 87 cents and 5-cent differential for each additional degree gravity ending with 30-30.9 gravity $1.12.

Lost Hills: Same as Midway-Sunset up through 25-25.9 gravity 87 cents, then 26-26.9 gravity 91 cents; 27 gravity 94 cents; 28 gravity 99 cents; 29 gravity $1.02; and ending 30-30.9 gravity $1.05.

Coalinga: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 59 cents; 21 gravity 62 cents; 22 gravity 65 cents; 23 gravity 68 cents; 24 gravity 72 cents; and ending 25-25.9 gravity 75 cents.

Wheeler Ridge: 14 to 19.9 gravity 55 cents; 20-20.9 gravity 57 cents; and 21-21.9 gravity 60 cents, with 3 cents more for each additional degree of gravity, ending 25-25.9 gravity 72 cents.

Oklahoma, Kansas, North Texas (Effective April 1, 1932).

Below 29 gravity: 76 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at $1.00.

North Texas: (Effective April 1, 1932).

Below 29 gravity, 76 cents, with two-cent differential upward, ending 40 gravity and above, $1.

Texas Panhandle: (Effective April 1, 1932)

Gray County: Below 35 gravity: 76 cents, with differential of 2 cents for each degree to 40 gravity and above, 88 cents.

Carson and Hutchinson Counties: Below 35 gravity: 66 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 78 cents.

West Texas: (Effective April 1, 1932).

Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico 65 cents.

Southwest Texas: (Effective April 11, 1932)

Refugio: Heavy 80 cents.

Refugio: Light: (Same as Gulf Coast—see below).

Gulf Coast: (Effective April 1, 1932).

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity: 80 cents, with differential of 1 cent for each degree to 40 and above which is posted at $1.00.

Mirando: 80 cents; Salt Flat: 75 cents; Darst Creek: 75 cents; Pettus: $1.00; Markham: Same as Gulf Coast.

Conroe, Texas: (Effective July 18, 1932).

Two-cent differential applies, beginning 35-35.9 gravity, 90 cents, ending 40 gravity and above, $1.

East Texas: (Effective April 1, 1932)

Flat Price: 98 cents.

North Louisiana and Arkansas: (Effective April 1, 1932).

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 25 gravity 68 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price $1.00 a barrel.

Smackover: 65 cents.

Rocky Mountain States: (Effective June 1, 1932).

Salt Creek: Below 29 gravity 76 cents; 29-29.9 gravity 78 cents with differential of 2 cents each degree to 40 and above. Top price $1.00.

Elk Basin and Grass Creek: $1.10; Big Muddy: 98 cents; Lance Creek, $1.15; Rock Creek: 90 cents; Sunburst: $1.05; Osage: 98 cents; Cat Creek: $1.20; Pondera: 90 cents; Hogback, New Mexico: 80 cents.

Mid-Western States: (Effective April 11, 1932).

Lima: $1.15; Indiana: 75 cents; Illinois: $1.10; Princeton: $1.10; Wooster: $1.25; Western Kentucky, $1.05.

Pennsylvania: (Effective April 25, 1932).

Bradford District: $2.02; National Transit Oil: $2.02; Southwest Pennsylvania Pipe Line Oil: $1.75; Eureka Pipe Line Oil: $1.70; Buckeye Pipe Line Oil: $1.55; Corning Crude: $1.05.

Michigan: (Effective July 13, 1932), Midland: 85 cents a barrel. Muskegon: 76 cents to $1.00 a barrel.

Canada: (Effective Nov. 3, 1931).

Petrolia: $1.90; Oil Springs: $1.97.

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A. P. I. Pull Rod and Drop Forged A. P. I. Clamp
¾" size with ⅞" x 3½" bolt, ⅞" size, 1" x 3⅞"

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A. P. I. Specifications

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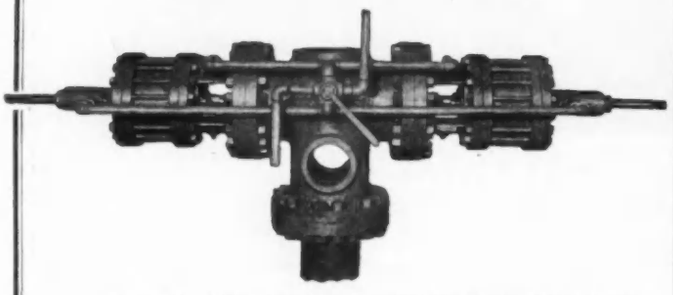
Manual, Steam, Air, Gas or Slush Pump operated. Ram Type.

MANUALLY OPERATED TYPE

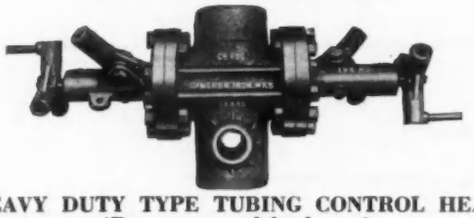


STEAM, AIR, GAS OR SLUSH OPERATED TYPES

TUBING CONTROL HEADS

(RAM TYPE)

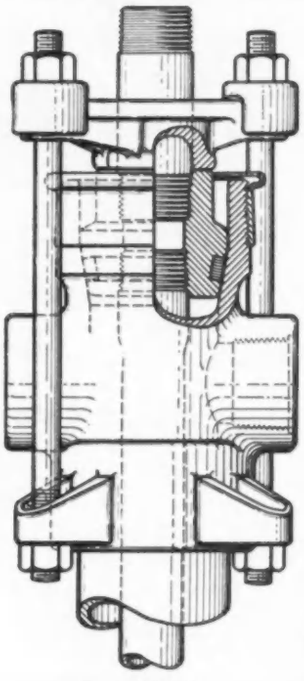
Complete equipment for absolute safety in well settings and inserting, raising, lowering or with-drawing tubing under pressure.



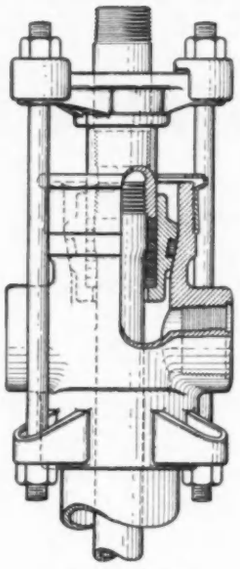
HEAVY DUTY TYPE TUBING CONTROL HEAD
(Rams actuated by levers)
Also furnished Medium Duty Type.

MEDIUM DUTY TYPE CONTROL HEAD OR BLOWOUT PREVENTER
(Rams actuated direct by screws)
Also furnished Heavy Duty Type

TUBING SEAL AND SUSPENSION HEADS



Type "HT"



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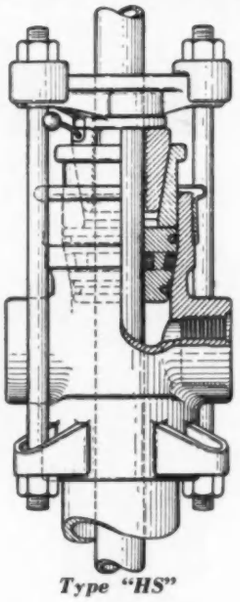


Type "HS"

Complete line of heads designed to give interchangeable types of suspension and to handle tubing under pressure with ease and safety even after well is completed.

CAMERON IRON WORKS, INC.

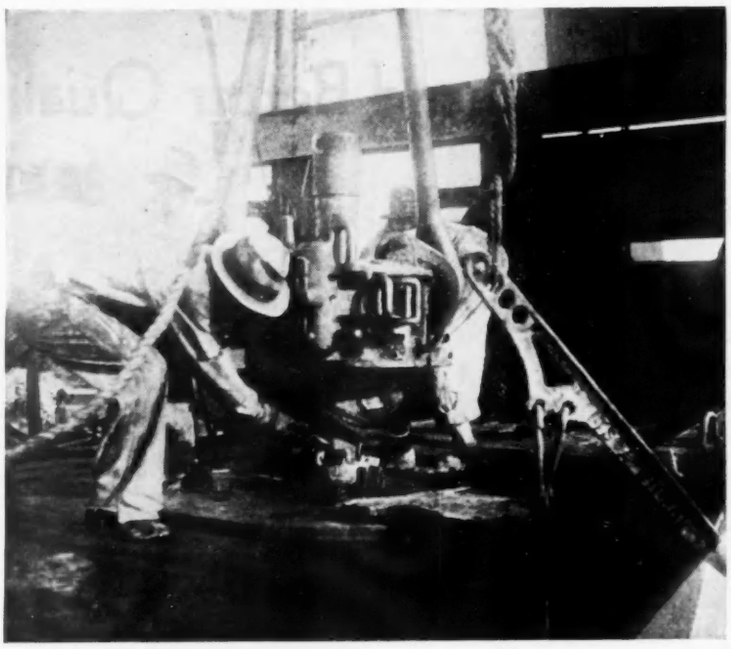
711 MILBY ST. **HOUSTON, TEXAS**

Deepest Texas Well *Furnishes* Outstanding Records

JACK LOGAN
Staff Representative

ALTHOUGH failing to attain one of the important distinctions for which he was bidding, that of setting a new depth record for oil production in Texas, Edwin M. Jones, independent operator of San Antonio, succeeded nevertheless in achieving some other remarkable records in the recent drilling of his deep test, Josephine Mitchell 1-B, in the Refugio field of Southern Texas.

Having been drilled with rotary tools to 9131 feet, the well gained the distinction of being the deepest hole ever sunk in Texas; and although the oil-bearing sand in which drilling was stopped failed to reward Mr. Jones with commercial production, the mechanical operations needed for giving the formation a fair test were all carried out with noteworthy success, with the result that the well is distinguished for having involved running of the longest string of casing ever set in Texas and performance of the deepest casing-cementing job in the state—one of the deepest cementing jobs, in fact, ever carried out successfully anywhere.



A critical stage in the casing setting job in Edwin M. Jones' deep Refugio well—landing the last joint. The 5¾-inch string of pipe was set at 9131 feet.

The pipe used for the deep production test was a string of 5¾-inch casing with a 110-foot section of screen attached below the bottom joint of the casing to allow for production which was expected from the loose sand, typical of Texas Gulf Coast fields, encountered at 9114 feet and still being logged when drilling was stopped at 9131 feet. The string was successfully landed at the bottom of the hole, and it was cemented through use of the Halliburton "full-hole" cementing device.

While drill stem tests are commonly employed in South Texas to ascertain producing possibilities of oil sands without sustaining expense of setting casing, such a test was not undertaken in this well because of its great depth.

When the prospective producing formation was encountered from 9114 to 9131 feet, considerable straw-colored, high-gravity oil showed on the slush pit, and the well showed exceptionally high gas pressure, estimates ranging as high as 4032 pounds. After the difficult feat of running and cementing the long string of pipe had been completed, however, and plugs had been drilled out, on July 10, the well flowed a little, but soon proved a disappointment by yielding sulphur water and salt water. It was announced subsequently that the well would be plugged back to one of the shallower oil-showing formations which had been penetrated.

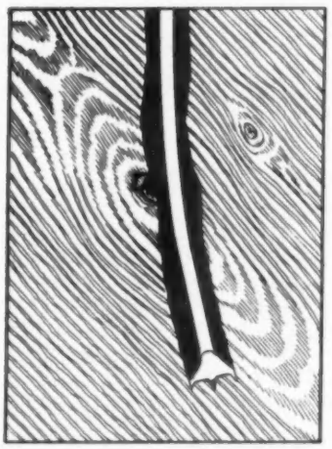
History of Early Operations

Before the interesting details on the deep casing setting and cementing job are presented, a brief account will be given of operations carried out and formations encountered in earlier stages of the drilling. The well produced oil originally from 5441 feet, but the output being unsatisfactory, the owner moved a heavy rotary rig over the location early in February, 1932, pulled liner, and began drilling deeper. Two important sands were penetrated before the 9114-9131 foot sand was reached; one at 6378-6430 feet filling the pipe 1400 feet with a 50-50 mud and gasoline mixture and building up 775 pounds pressure on a 20-minute drill stem test, and a sand at 6875-6904 feet showing oil at the top and salt water at the bottom.

The hole was carefully handled from spudding to final depth. The first pipe set was 13-inch (outside diameter), weighing 50 pounds to the foot, cemented at 1256 feet. The next string was 9⅝-inch, 40-pound casing, set at 5404 feet above the sand in which the well was originally completed.

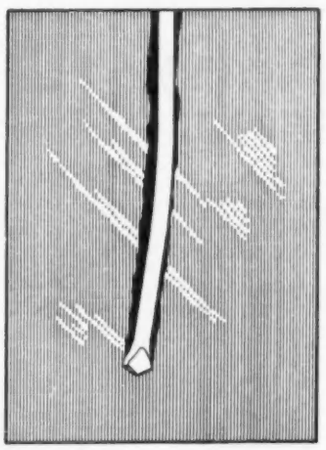
Equipment Used in Drilling

Equipment used in drilling the well included three 125 horsepower "Oil Well" boilers; "Oil Well" No. 9 drawworks; "Oil Well" 15 by 7¾ by 20 pumps, equipped with Mission valves; Union Tool rotary table, crown block, and traveling block; Byron Jackson "Triplex" type hook and "Slip-Grip" elevators; Emsco 122-foot steel derrick; and Hazard wire line. Spang Chalfant four-inch, 16.6-pound drill stem was used. Texas Iron Works supplied high-



Unguided
Wood Drill

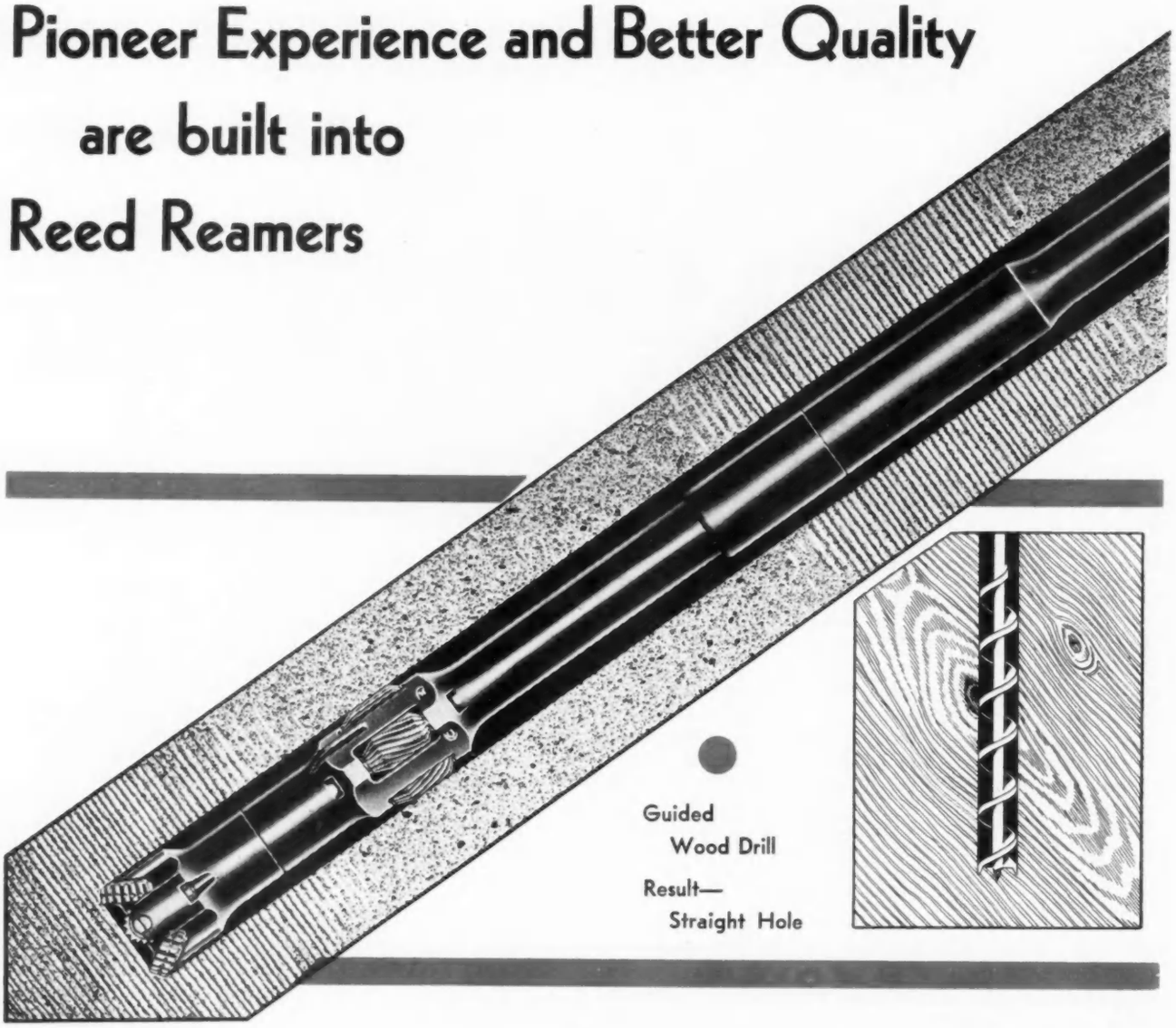
Result—
Crooked Hole



Unguided
Steel Drill

Result—
Crooked Hole

Pioneer Experience and Better Quality are built into Reed Reamers



Guided
Wood Drill

Result—
Straight Hole

Unguided
Formation Drill

Result—
Crooked Hole

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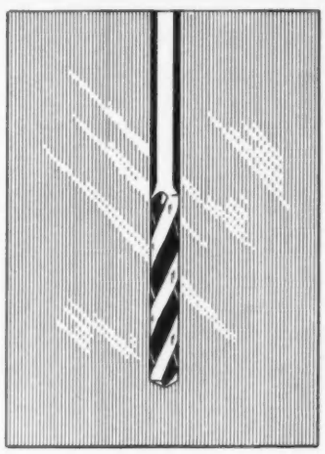
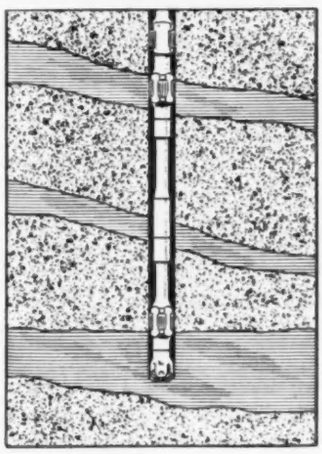
Guided
Steel Drill

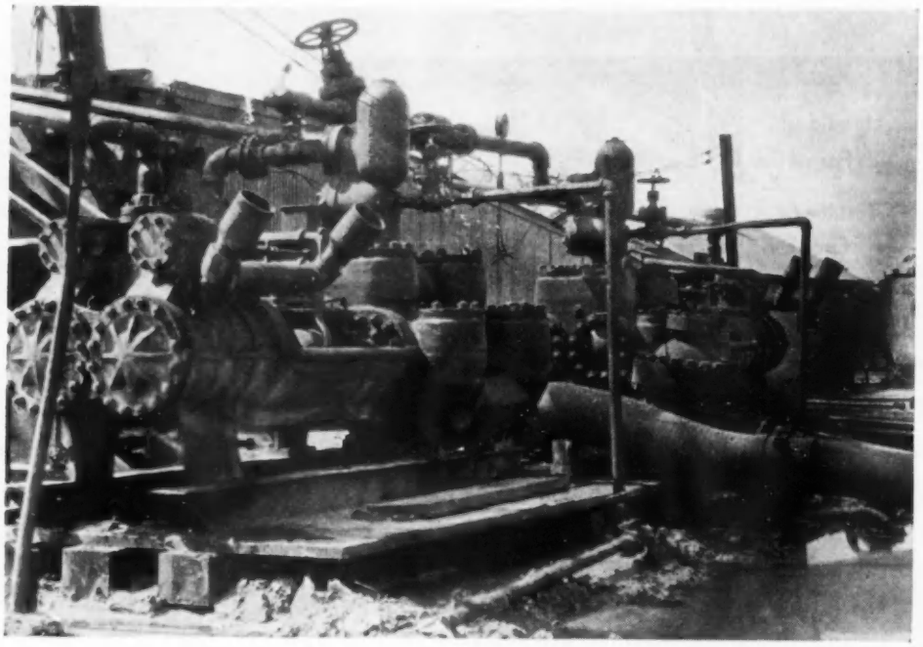
Result—
Straight Hole



Reed Guided
Formation Drill

Result—
Straight Hole





"Oil Well" pumps, 15 by 7¾ by 20, were used on the Refugio deep test.

pressure valves, and a heavy Cameron Iron Works blow-out preventer was employed. Mission Sales Company rotary slips were used during all drilling operations as well as in suspending the casing throughout the difficult job of setting the final string. Hughes core barrels were employed in the extensive coring carried out in the test. The Mid-Continent Mud Company of Houston furnished the clay and other colloidal material as well as weighting material. Approximately 100 tons of the drilling mud, made from El Paso and Arizona clays, were used on the job.

While running and setting the final string of casing in this well constituted performance of an exceptionally difficult feat because of the great depth of the hole, the successful placing of cement around the bottom of the casing for a shut-off was likewise a particularly noteworthy accomplishment since the bottom hole temperature was calculated as being between 280° and 300° F.

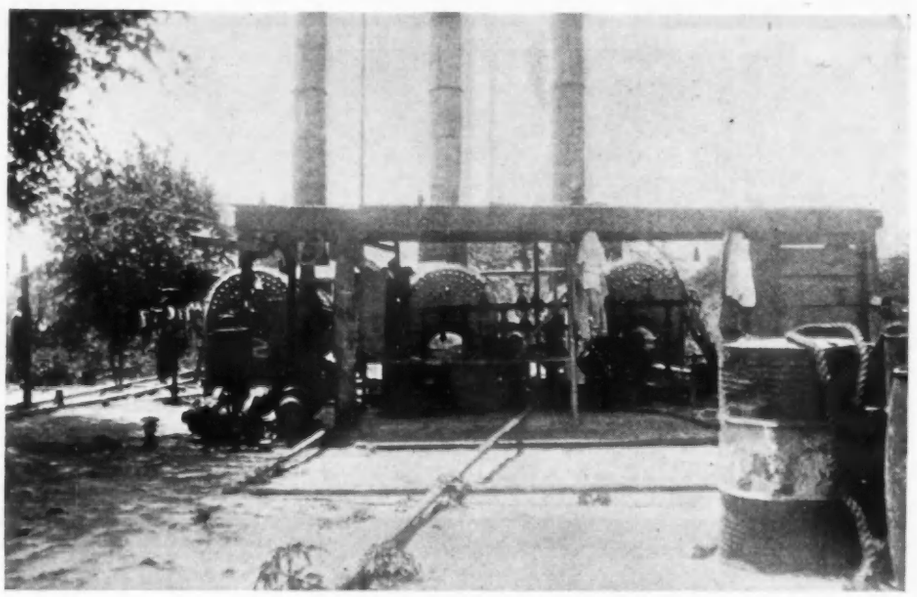
Setting of Casing

The long string of pipe which was set at the bottom of the 9131-foot hole was run in the fast time of 15 hours and 15 minutes. Casing which made up that final string was 5¾-inch outside diameter external upset pipe, weighing 23 pounds to the foot, furnished by Spang-Chalfant & Company; the bottom 110 feet was Stancliff wire-wrapped screen furnished by Howard Smith Company. On the bottom of the screen was a T I W set-shoe. The inside screen was lined with HOWC screen lining, furnished by Halliburton Oil Well Cementing Company to assure thorough washing of heavy mud from behind the screen. On the top of the screen was a Halliburton float collar and a "Full-Hole Cementer." In handling the casing six wire lines were used to 7200 feet, and eight lines from that level to the bottom. In connection with the casing setting job, it is said that the pipe used in the well represented the longest string of casing ever set through a rotary bowl with rotary slips.

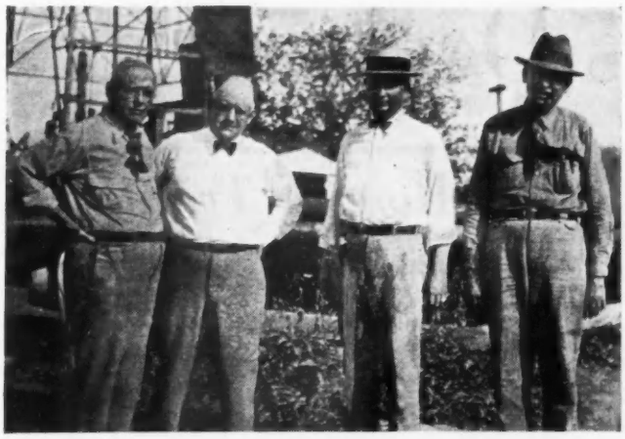
In connection with the cementing job a study of temperatures had been made by Halliburton Oil Well Cementing Company with cooperation of Independent Oil & Gas Company. Actual readings were made down to 5200 feet, at which depth a temperature of 185° F. was found. The temperature gradient indicated that the formation temperature at 9100 feet was between 280 and 300 degrees. The temperature of the circulating mud just before cement was set was 120° F. Thirty-five tons of ice were used to chill the water to be mixed with the cement.

Special Cement

A special slow setting cement, which could withstand the high temperature, was prepared for the job by Lone Star Portland Cement Company of Houston, and 250 sacks of the cement were used. The cementing work was done by Halliburton Oil Well Cementing Company under supervision of W. R. McClendon, superintendent of the Gulf Coast division for that concern, and the cementers were "Sandy" Brockman, C. C. Hearn, and L. B. Meaders. C. P.



Here are the three 125 horsepower "Oil Well" boilers used on the Refugio deep well. They represent one of the largest hook-ups of boilers ever installed on a drilling site in Texas.



Edwin M. Jones is shown here with representatives of some of the equipment companies which supplied materials for his Refugio deep test.

From left to right, those in the picture are: J. H. Tucker, of Mission Sales Company, Mr. Hardcastle of Spang Chalfant & Company, Mr. Jones, and M. "Bink" Manning, Houston Oil Field Materials Company.

Parsons, field engineer for the Halliburton interests, cooperated with Mr. McClendon.

There was much action going on during the cementing operation, and the cement was pumped down the hole and placed in the remarkably fast time of 22 minutes, a period frequently consumed in cementing jobs at much lesser depths. The entire cementing job on the Refugio well was done in a total time of 49 minutes—from the time the first sack was mixed until the cement was placed.

Edwin M. Jones is given much credit, not only for the faith and courage necessary to undertake such an unusual and expensive test, but also for the hard work and untiring efforts spent in taking care of the numerous details. Tribute is also paid to the two very efficient drilling crews. The day driller was Bill Lynd, and members of his crew were Monroe Dillon, Raymond Cook, J. H. Skidmore, Leon Holland, and Jim Wilkins. The night driller was George Smith, and his crew was composed of W. F. Davis, M. A. Harvey, L. K. Vernon, H. E. Baylis, and John Surber.

Joseph M. White and G. Roy Anderson handled the checking the pipe tallies, and it is significant that the pipe hit bottom exactly to the foot figured.

Temperature Problem

While much important work had already been carried out in the Refugio deep test when the final, long string of casing was successfully cemented, there still remained considerable delicate work for the engineers and workers on the rig to perform.

High temperature had caused the casing to expand greatly, for instance, and it was realized that a flow of gas developing on drilling in would cause the pipe to contract. Engineers therefore took precautions to take care of such expansion.

In drilling the well a string of 2½-inch, 6½-pound, seamless, special long upset tubing was employed.

Heretofore the deepest well in the Refugio field was Moss-Heard 1 of Mission Drilling Company of Texas, located on Block 111, and abandoned in the summer of 1930 at 8120 feet as a dry hole. There are some wells in the field over 6000 feet deep and several more than 7000 feet, as well as the one below 8000 feet which may possibly be deepened successfully to the new oil horizon if production is proven. Refugio is a field of many pay sands, producing gas from numerous horizons between 1500 and 3700 feet, low gravity oil at 3700 feet, and light oil from sands around 5500, 5800 and 6500 feet.

Some Other Deep Drilling Records

Some of the other deep drilling records in fields all over the world which may be of interest for comparison with the Refugio deep test are herewith cited. Before the Refugio well reached its present great depth, the deepest hole in Texas was University 3-B of Group One Oil Corporation (Continental Oil Company) in the Big Lake field, Reagan County, with bottom of the hole at 9020 feet. That well is producing high gravity oil from the bottom portion of the hole, and it is the deepest producing well in Texas.

The deepest hole so far drilled anywhere in the world was Penn Mex Fuel Company's Jardin 35 in Vera Cruz, Mexico, drilled except in early stages, with rotary tools, and according to last reports, about a year ago, had total depth of 10,585 feet.

The deepest cable tool test in the world was United Fuel Gas Company's No. 4053 at Frozen Camp, Jackson County, West Virginia, recently reported to have depth of 9101 feet, with additional drilling contemplated.

Deepest in United States

Distinction of being the deepest test drilled in the United States is held by a rotary-bored well in the old Cement Pool, Caddo County, Oklahoma. The test was Preston Culp 6 of Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation, which reached 10,079 feet, its final depth, on October 8, 1931. An outstanding achievement in that test was the successful running of a string of 6⅝-inch, 26.2-pound casing to 9777 feet, although efforts to cement that long string were not successful. (See *The Oil Weekly* January 29, 1932, page 68.)

The Oklahoma well is only slightly deeper, however, than the one in California which was the first in the world to exceed 10,000 feet—Chanslor-Canfield-Midway Oil Company's Hobson A-2, near Rincon field, which reached total depth of 10,030 feet in June, 1931.

The deepest producing well in the world is Associated Oil Company's Lloyd 83 at Ventura Avenue, California, drilled to 9700 feet, and completed about the middle of July, 1932, with an initial flow of 6000 barrels of oil daily. The hole appeared to be partially sanded, however, and it was believed that a cleaning-out job would increase production.

Owner and Drilling Crews of Refugio Deep Test

Standing: left to right, W. F. Davis, George Smith (driller), J. M. White, Edwin M. Jones (owner), Bill Lynd (driller), Monroe Dillon and Raymond Cook. Sitting: left to right, John Surber, H. E. Baylis, L. K. Vernon, M. A. Harvey, J. H. Skidmore, Leon Holland, and Jim Wilkins. Another member of the crew, C. Roy Anderson, is not in the picture.

Zwolle Expects Deeper Pays Over Large Area

Glen Rose of Trinity Now Being Prospected

H. D. EASTON

THE producing area of the Zwolle field continues to spread and it may soon reach beyond the originally specified 35 miles of east-west length. With approximately 150 operations, and several more added each week, this field is the most active in Louisiana and maintains the leading position in the production of light oil.

Two deep tests are cutting every foot with the core barrel, one of which is about to make a test in the Glen Rose and the other drilling in the Glen Rose at a deeper geological level. These two deep tests, providing such complete and reliable information, are of real interest. But, before discussing these evidences of deeper pay in the Zwolle area, it is well to note the position this structure occupies in relation to regional conditions.

By referring to the map of North Louisiana Uplift, it becomes evident that the Zwolle structure and the East Texas structure occupy similar positions. Shreveport is somewhat centrally located on a great structural dome, a fact that becomes apparent on a contour map of the area, but does not seem so centrally located on the map presented whereon the Uplift is pictured by outlining the contact between the Wilcox and the Claiborne formations. Zwolle lies far down the *south* flank of this great dome, whereas the East Texas field lies far down its *west* flank. Each long structure owes its formation to faulting at right angles to the regional dip of the beds—which directs Zwolle nearly east-west and the East Texas field north-south. Each, in my opinion, will find additional pays in the Glen Rose of the Trinity, but the East Texas field remains unprospected below the Woodbine, whereas Zwolle now has some evidences deeper down.

It is scarcely thinkable that the many operators of East Texas will rest on the "shoreline" and overlook the deeper possibilities any more than "Dad" Joiner waited for professional approval before drilling in the first place. Some of them will drill on down to the Glen Rose, and it is my belief that new pays will be found on this large structure whenever such deep drilling is done. It seems probable that the Lower Cretaceous beds will prove similar in both of these flank structures, hence the deep prospecting at Zwolle will be of general interest.

Zwolle Glen Rose

The two deep tests in the Zwolle area were started about the same time in 1931. One is being drilled by R. L. Gay, Trustee, and is known as Long-Bell Lumber Company A-1. It is in the NEc NW NW Section 10-8-13, about four miles north of the nearest Zwolle marl-chalk rock production. The other is drilling by Loring Oil Company and known as Bowman-Hicks Lumber Company 18, in the SWc SW NW Section 15-7-12, and at the extreme south edge of the present area of marl-chalk rock pay. Gay's test is about nine miles northwest of the Loring's, while the present shallow production lies east-west between these two wells. Gay's well has kept ahead of the Loring and is now much farther down in the Glen Rose, hence it will be discussed first.

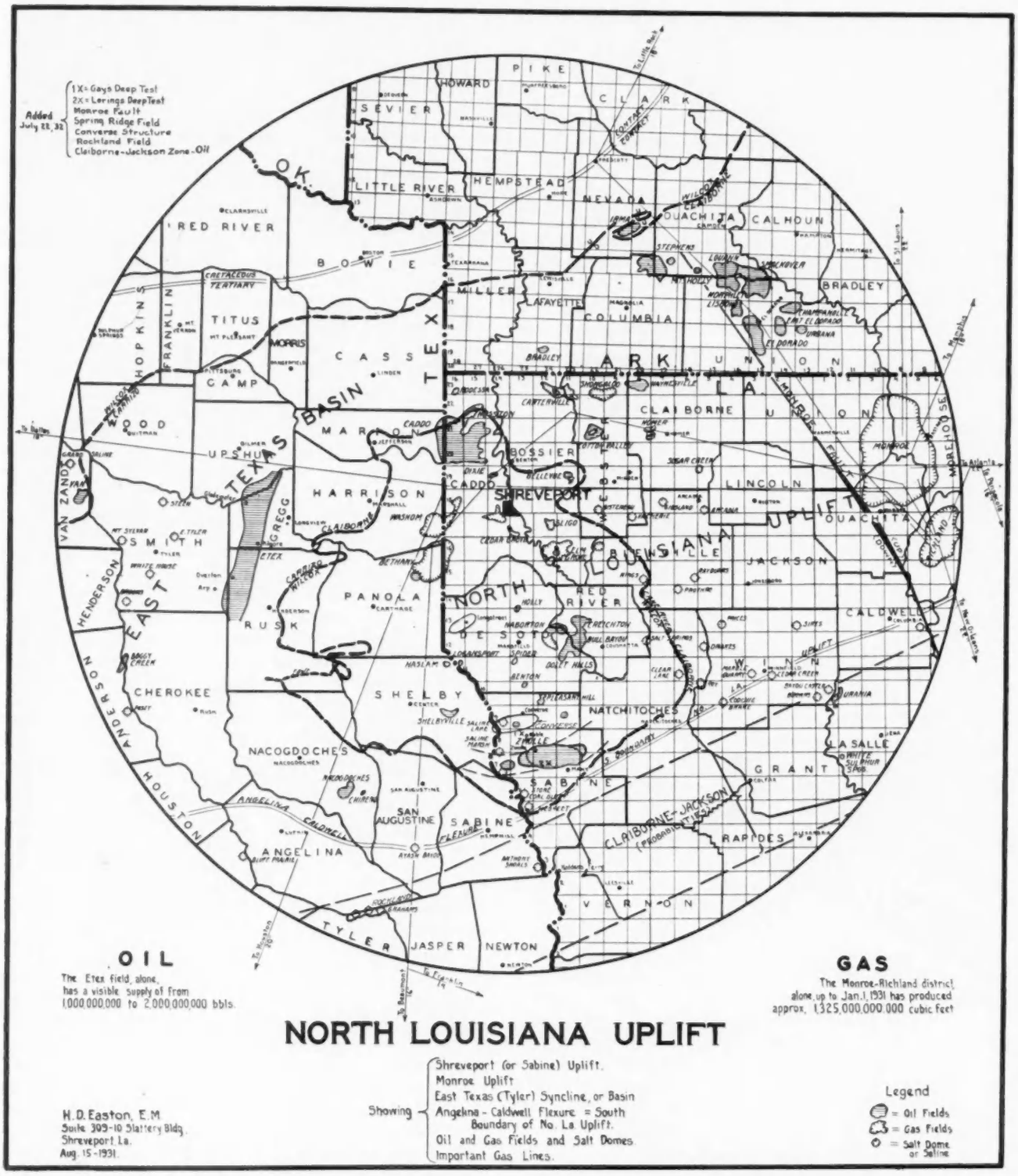
Gay, starting with an elevation of 265.4, found no pays or important showings in the Upper Cretaceous. He found the Lower Cretaceous (probably Georgetown of the Washita) at 3430 feet and drilled hard lime to 3619 feet. A drill stem test of a sandy lime beneath this hard lime (3619-3624 feet) gave four fourbles of 48-gravity oil and five fourbles of salt water. Located a little better structurally, this could make a pay horizon.

Top of the Glen Rose was found at about 4204 feet (positively identified at 4280 feet) but its entire section differs from that known in the several producing fields higher up on the main Uplift. Whereas these other fields find Red Beds in the Glen Rose, Gay's well found the entire section to consist of gray lime and dark shale, the shale having a greenish tint. There was no red, and but a few inches that was even brownish. My interpretation of this difference in color is that the materials were laid down in deeper water, hence I speculated there would be no anhydrite beds in the Glen Rose like those found in Rodessa, Cotton Valley, and elsewhere.

The first sand of any consequence was found from 4754-4764 feet where the cores showed shale with lenses of fine-grained, hard sandstone, which evidently carried some salt water. From 4775 to 4789 feet the core barrel failed to pick up all that it cut but brought out oolitic lime carrying oil. This looked like an oil well, so plans were made to set the first string of casing used in this hole (except the 52 feet of surface 12½-inch) and test this oolitic lime. It was speculated that this oolitic lime represents the same one that is producing much rich gas in Sugar Creek, Rodessa, etc., just below the anhydrite series, but that this anhydrite series was missing in Gay's well. Seven-inch OD casing was set at 4725 feet so as to take in the sandy shale above the oolitic bed. When bailed, the well showed a small flow of salt water, so coring ahead has been done and some additional valuable information obtained.

The question of the presence or absence of anhydrite was uppermost. After continuing in the same kind of gray lime and greenish dark shale, a couple of inches or so of anhydrite was picked up at 5490 feet. About four inches more was found at 5588 feet, and quite a bed from 5662 to 5677 feet. More was found in shale between 5693 and 5715 feet, and, again, a little in shale between 5854 and 5860 feet. The well is now drilling (coring all) at 6052 feet with no appreciable change in nature of the beds, and no more anhydrite.

If this represents the entire anhydrite series in this well,



it gives but 370 feet as the total zone. The other fields higher up on the regional dome have a greater thickness:

Thickness of Anhydrite Zones	Feet
Bellevue	500
Bethany	550
Bull Bayou	600
Cotton Valley	500
Homer	500
Pine Island	450
Richland	450
Rodessa	750
Sugar Creek	550
Zwolle	370?

After finding this anhydrite zone, and knowing that other fields have found pay beneath it, the present speculation is that Gay should reach another oolitic zone shortly which will truly represent the one known to be commercially productive elsewhere. Aside from this speculation that Gay is approaching an important oolitic pay zone (if it is present at all that far south) he will have unknown conditions to prospect but, at unknown and unknowable depth, the basal Trinity sand itself may be present.

Turning now to the Loring Oil Company's test, on the extreme south side of marl-chalk rock production, it started with an elevation of 264.14 feet—almost the same as Gay's. This log checked through the Upper Cretaceous practically

foot for foot with Gay's except for the greater thickness of Wilcox: it went to a drilling depth of 2482 feet to reach the top of the Zwolle marl, whereas Gay went to but 1897 feet. But the marl-chalk section, the Ozan and the Tokio were the same, and each found the Lower Cretaceous (Georgetown) at the same interval beneath the chalk. Loring topped the Lower Cretaceous at a drilling depth of 3999 feet and gay at 3430 feet—570 feet higher structurally.

Checking so exactly, it was speculated that Loring should top the Glen Rose about 4770 feet, but they found it at about 4690 feet, thus having found a thinning of Lower Cretaceous section overlying the Glen Rose and making it just that much better structurally.

Loring then drilled almost the same section of gray lime and greenish shale as Gay to reach the salt water zone and (immediately beneath it) the oolitic bed carrying oil. There was a great quantity of salt water, of about 172°F., and three cars of baroid were used to shut it off. Special 8⅝-inch casing was seated just beneath the salt water to test the five feet of oolitic lime from 5272-5277 feet. This well has 10-inch casing set at 3950 feet, hence it should allow this next tight-fitting size to land on the seat some 1300 feet below. This, of course, would allow two other strings of smaller size to be used later if needed and in case the well goes down to, say, 7000 feet. It should not take long to determine the pay value of this oolitic formation.

If Loring fails to make a good well and starts drilling deeper, the next horizon in sight is one that Gay found below the middle of the anhydrite zone. Gay cored into a sandy shale at 5730 feet and from there to 5760 feet had much salt water which was held back by using baroid. Loring should top the anhydrite zone about 5960 feet, the salt water zone about 6220 feet and the base of the anhydrite about 6350 feet. Before they reach this point, Gay may have determined what is to be expected still deeper.

It is clear that neither of these wells is located where it could tell the most about deeper pays in the Zwolle field. The Loring test is too far south to be of greatest value to the field in general. Gay's deep test is entirely off the Zwolle structure and not quite far enough north to be on the Converse structure. On the south edge of the Converse structure a well found much oil in the Nacatosh-marl-chalk zone which was reached 255 feet higher structurally than Gay's test although but about three miles away and almost along the strike. Had Gay's well been that far north, it might have made a real oil well at the base of the Washita instead of finding salt water along with the 48-gravity oil.

However, the foot-by-foot likeness of these two deep logs speaks much for the deeper possibilities on the known structure between them—also for the Converse structure north of Gay's test.

The discussion of the two deep prospect holes shows that the main producing field lies between them. Obviously, a deep test should be drilled on the higher portion of the great Zwolle structure. At the present time, the highest point, structurally, was found by A. H. Tarver in Baker 1, NWc NW NE Section 36-8-12, near the east-west center of the producing area. This well found the top of the Zwolle marl at sub-sea of 1861 feet and went to 4200 feet. It set a string of eight-inch casing at 2212 feet (surface elevation 347.58) and probably is in fine shape to be deepened.

This well had a shortening of the interval between the chalk and the Lower Cretaceous: it found the Washita at 3580 feet. This thinning of the formations is indicative of favorable structure. It should reach the top of the Glen Rose about 4360 feet (only 160 feet more to drill to reach this point) and should find the oolitic zone at about 4930 feet. This would make it very high structurally and might readily find oil instead of salt water in the sandy zone overlying the oolitic lime. In cases where a well is so high structurally there is always a possibility of the beds thinning and thus giving even shallower drilling depths than named above. Certainly, this well should go deeper—it should go at least to this first oolitic zone, where I would expect it to make an oil well in the Glen Rose.

Whereas the structures superposed on the main Uplift give gas production rich in gasoline content from the Glen Rose, it is probable that structures farther down the flanks (as East Texas and Zwolle) will find high-gravity oil instead of gas.

Certain portions of this great area may produce from an intermediate zone, corresponding to the Woodbine. In the Blue Lake portion of the Zwolle field, considerable oil has been seen in and just beneath the Austin chalk, which zone showed for a well on the Converse structure farther north. There is no reason why some of this area should not produce from this zone just above the Lower Cretaceous.

Since Gay tested four fourbles of 48-gravity oil along with five fourbles of salt water immediately beneath the Washita, in his Long-Bell Lumber A-1, and since the Pleasant Hill field and the Bull Bayou field have pays in this zone, it is likewise probable that some portions of the Zwolle structure will find production therein.

The Zwolle field seems destined to spread beyond the originally specified 35 miles in length. It may readily equal or exceed the East Texas field in areal extent. Each is far down the flank of the great regional Uplift.

There is reason to believe the Zwolle field will produce high-gravity oil from the Glen Rose at drilling depths and conditions that will not be costly, and that some portions of the large structure will have pay in the Woodbine and at the base of the Washita.

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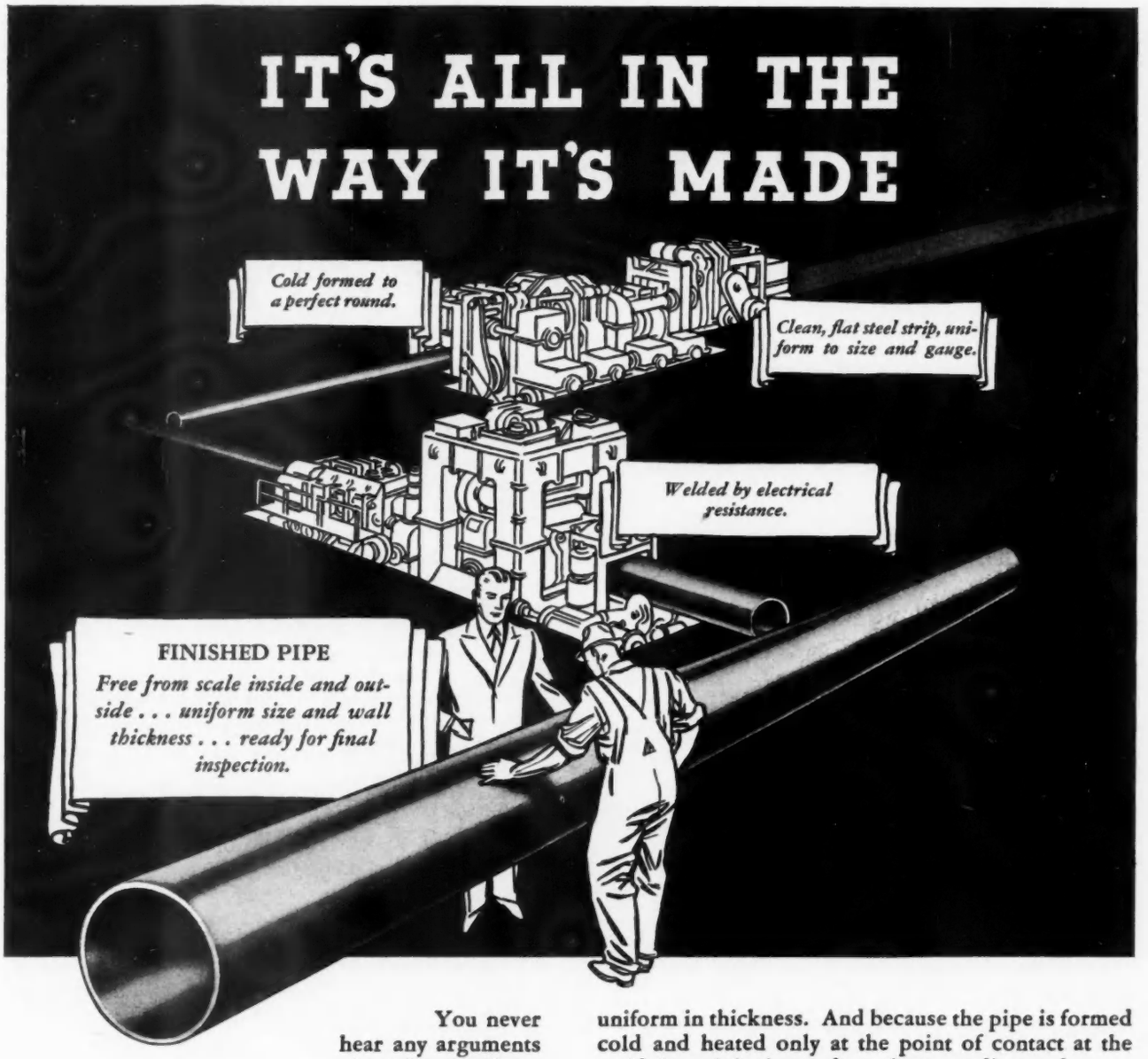
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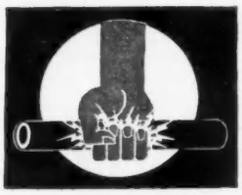


RESERVOIR *and* BOTTOM HOLE

Producing Pressures

As a Basis of Proration

C. V. MILLIKAN
Amerada Petroleum Corporation

ALLOCATION of allowed production in a prorated field by the use of bottom-hole pressure is a method which is sound in theory. Thus far it has had limited application because the experience in correlating bottom-hole pressures with the depletion of wells or fields is not sufficient to interpret all the pressure changes. With additional data and more general knowledge of bottom-hole pressures, their use in proration will probably become common.

Bottom-hole pressure is the pressure at or near the bottom of a well. It is usually determined at the face of the producing horizon. Determined while the well is producing, it may be called the bottom-hole producing pressure or bottom-hole flowing pressure. If the well has been shut in or shut down long enough for the pressure in the producing horizon within the drainage area of the well to equalize, it may be called the reservoir pressure.

The readily seen advantage of bottom hole pressures as the basis of allocating allowances of wells under proration is that with this plan it is not necessary to open wells to full flowing capacity at intervals. So far only the Yates field in West Texas is handled under this plan, and while there are possibilities of inaccuracies, the fact that it continues is evidence that the engineers interested are satisfied with the method.

This paper was presented before the Los Angeles Meeting of American Institute of Mining and Metallurgical Engineers, July 28, 1932.

Methods of Allocation

The allowable production from a prorated field may be allocated to the individual wells or leases by three methods:

1. Bottom-hole producing or flowing pressures.
   a. The potential capacity of a well to produce.
   b. A uniform differential pressure while producing at the allowed rate.
2. Reservoir pressures.
3. A combination of bottom-hole producing pressures and reservoir pressures.

In most prorated fields the allowed production is allocated to the individual wells or leases in proportion to their individual potentials. This method is based on the theory that there is a direct relationship between the permeability and the porosity of the reservoir. More directly stated, it means that there is a direct relationship between the amount of oil in the reservoir and the rate at which it will move through the reservoir. While in general this relationship is true, it may vary considerably in different wells. Furthermore, in many wells the capacity of the reservoir to deliver oil to the well is greater than the capacity of the flow string to deliver oil to the surface. It is especially true where the potential is determined by flowing through tubing or pumping. When potentials are established under such conditions the equity of the allowed production may be affected materially.

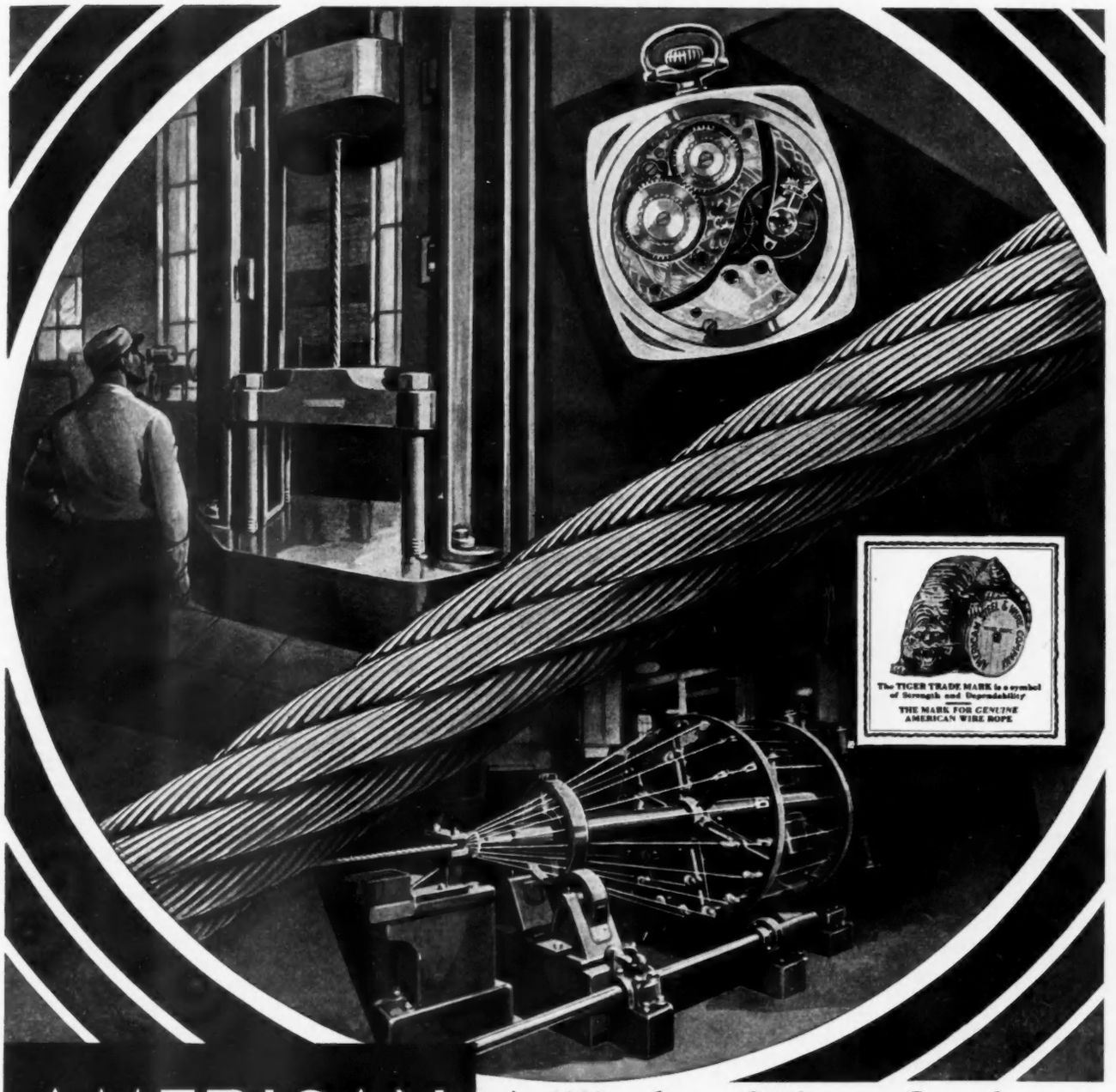
There are conditions under which it is undesirable to produce a well at its maximum rate, even for a short time. It may cause premature water intrusion, sanding up, or endanger cutting connections. If the wells have large potentials but the allowed production is small, additional equipment is required for the purpose of taking potential tests. In many wells the flow string required for taking potential tests is not the size through which the well will flow most efficiently when it is producing at its allowed rate. For such wells the operator must choose between the more efficient method of producing, and accept the penalty of a lower potential, or stand the expense of changing equipment each time a potential test is taken. The conditions which affect the potential also affect the allowable and therefore the recovery.

If the relative potentials could be established on the basis of the sand conditions within the drainage area of the wells, inequities induced by flow strings, equipment, or method of producing would be eliminated. If the theory of proration based on potential is correct, it would be more equitable to base the proration on the capacity of the sand to deliver fluid to the well than on a potential that might be affected by something other than the conditions within the producing formation. Bottom-hole producing pressures can be used to obtain the relative capacities of wells either by calculating the open flow or by determining the rate of production which will give a uniform differential pressure for all wells.

There is a relationship between the rate of production of a well and the differential pressure between the reservoir and the bottom of the hole. By determining the bottom-hole pressure at a few different low rates of flow, a curve can be drawn from which an open flow can be calculated.[1] This method has been used successfully to determine the open-flow capacities of gas wells.[2] Its application to oil wells may require considerations that are not necessary in gas wells. The calculated open flow of small oil wells may be reasonably close to the actual, but in larger wells in which the velocity of flow is high enough to set up turbulence, the calculated open flow may be higher than the

[1] C. V. Millikan and C. V. Sidwell: Bottom-hole Pressures in Oil Wells. Trans. A.I.M.E. (1931) 92, Petr. Div. 199. Also, D. Nix: Determination and Application of Depth Pressures in the Yates Field. Trans. A.I.M.E. (1932) 98, Petr. Div. 356.

[2] H. R. Pierce, and E. L. Rawlins: The Study of a Fundamental Basis for Controlling and Gauging Natural Gas Wells. U. S. Bur. Mines Rept. of Investigations 2930 (1929).



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actual. Flow strings of various sizes and different gas-oil ratios will also cause variation of the calculated and actual open flow.

The differential pressure between the reservoir and the well causes the fluid to move from the reservoir to the well. The amount of fluid that will move at a given differential pressure is proportional to the permeability of the sand. Therefore, if each well is produced at the rate that will give the differential determined for all wells in the field, the relative capacities of the wells to produce would be established.[3] The uniform differential may be expressed either in actual pressure or in percentage of the reservoir pressure. The latter method is probably more equitable because the relationship between porosity and permeability is not equal in all parts of a field. A well having a more permeable sand would have a greater allowable than its equitable proportion, therefore the reservoir pressure would decline more rapidly. If the allowable were based on the actual differential pressure, the well reservoir pressure would continue to decline more rapidly than the field reservoir pressure. If the percentage method were used, the actual differential, and consequently the allowable, would be reduced. This would maintain a more uniform reservoir pressure throughout the field.

Maintenance of uniform reservoir pressures is the most equitable method of prorating. If the reservoir pressure in a field is kept uniform at all stages of depletion, there will be no migration of oil and gas from the drainage area of one well to that of another. At any stage in the life of the field each well will have withdrawn the same proportion of its recoverable reserves as any other well.

Decline of Pressure

When allowed production is allocated on the basis of decline of reservoir pressure, some tentative distribution must be made. A method which considers the rate of production seems most logical. The tentative allocation, however, need not be established with the accuracy that is necessary when the proration is based on the capacity of the wells to produce. The allowable would be adjusted when the next set of closed-in pressures was taken. Wells that have a greater decline in reservoir pressure than the average in the field will have the allowed production correspondingly decreased, while for those in which the reservoir pressure has declined less than the average the allowed production will be proportionately increased. These periodic adjustments will equalize the reservoir pressures of the various wells, so that a uniform decline of the reservoir pressure in the field will be maintained. When the field is exhausted each well will have produced the same proportion of the original oil and gas content in the reservoir within the drainage area of the well as the total recovery of the field is of the total original oil and gas content of the field.

It is indeed a good method of proration that can be put into practice without some question of its equity or practicability. Allocation of production on the basis of bottom-hole and reservoir pressures is in general the most equitable, but also it may have most difficulties to overcome in practical application. Some of the problems may be overcome easily while others may require experimental work and careful study of the field.

In fields in which there is a gas area or high gas-oil ratio area in the high part of the producing horizon or zone, the pressure decline will probably be more rapid than the actual proportional withdrawal of oil. The pressure-recovery relationship is dependent on the reduction of actual cubical contents in the reservoir, whether it be free gas, oil or water. In areas where the gas-oil ratio is high, the decline in reservoir pressure per barrel of oil is greater than where the gas-oil ratio is low, because the content of the reservoir is reduced by the absolute volume of the free gas in addition to the amount of oil. In such wells the allowed production of oil would be reduced in the high gas-oil ratio wells. The net result would be that the allowed production would be based on the cubical contents of the reservoir withdrawn rather than on the amount of oil only. It would go far to conserve gas, especially free gas, in a field.

Water Drive

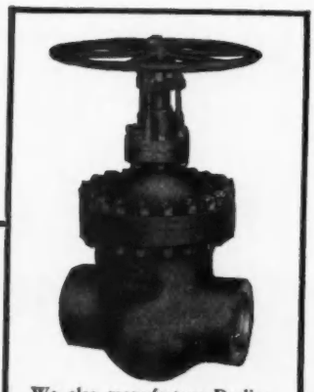
Fields in which there is encroaching water have a problem of a different type and one which involves the question of what amount of oil a well located on the edge of a field is entitled to produce. As oil and gas is withdrawn from the central part of the field and pressure is reduced, water moves toward the area of lower pressure. The inmoving water replaces some of the oil and gas that has been withdrawn, and the pressure in the reservoir is thereby partly maintained. The pressure is kept highest near the encroaching water. On the next adjustment wells near the water would have an increase in allowed production while wells farther from the water would have a decreased allowable. The method could be carried so far that the wells farthest from encroaching water would be almost shut in and the oil would be produced from the wells nearest the water. When the flood approached the wells that originally were farthest from the encroaching water, the pressure and therefore the allowed production, would be increased.

While such a proration method may result in some apparent inequities in favor of the edge leases when encroaching water is present, it is probable that in the end there would be a greater recovery from the field. It is generally recognized that a slow, even-moving water-flood will recover more oil from the sand than a fast-moving waterflood. The only advantage that the edge wells would have eventually would be that of obtaining their recoverable oil earlier than the wells nearer the central part of the pool.

A condition that may cause difficulties in some fields is the high rate at which reservoir pressures equalize. Rate of equalization will depend on the permeability of the sand, distance between wells and the pressure differential created. For a high rate of production, wells could be closer without inequities than for a lower rate. For a given rate of production wells could be closer in a tight sand than in a more permeable sand. When the well spacing is close and the rate of production too high, pressures between adjacent wells may equalize even when the difference in the pressure is less than the probable error of the determined pressure. The present instruments will measure pressure with less probable error than the variations which may actually occur at the bottom of a well, even when every precaution may be taken to prevent irregularities.

At present the Yates field in Pecos County, Texas, is the only one that considers the pressure in the reservoir or at the bottom of the wells in its proration plan. In that field, potentials of the wells that were taken originally by open flow are adjusted at intervals as the reservoir pressures change. Even though there may be some question of the mathematical equity of proration methods based on bottom-hole pressures, they would be as equitable as most of the methods which are being used at present, and no doubt better than some of them. With some further experience in interpretation, bottom-hole pressures promise to be an equitable and practicable method of allocating allowed production in prorated fields.

[3] H. D. Wilde, Jr., and T. V. Moore: A Method of Determining Production Allowances in Prorated Fields. Proc. Amer. Petr. Inst. First Mid-Year Meeting Division of Production.



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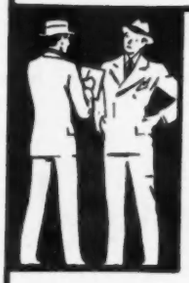

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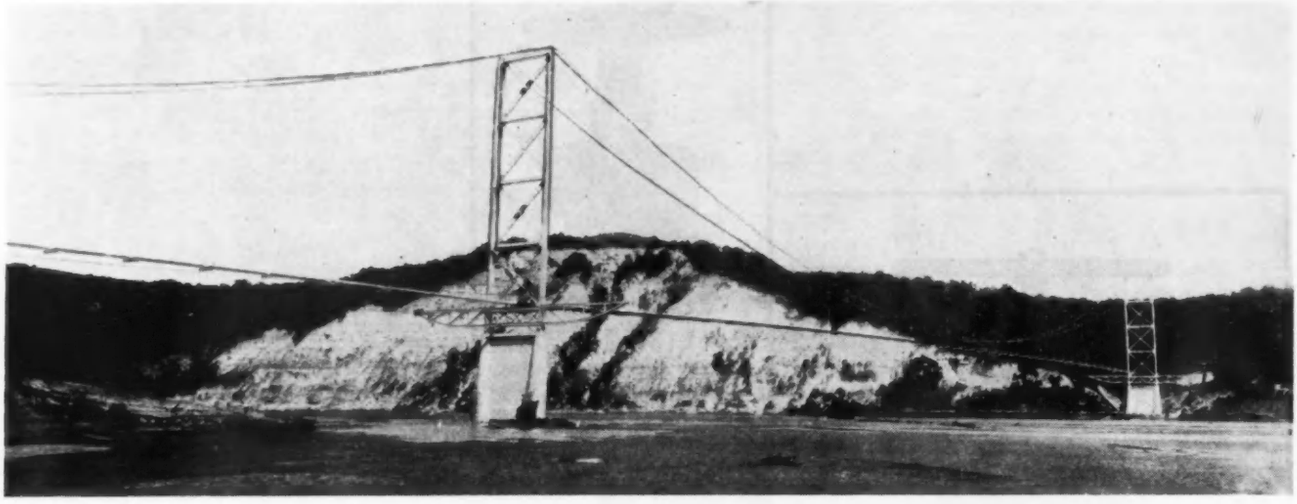

Northern Gas & Pipe Line Company's Missouri River Crossing, Nebraska into South Dakota, at Ponca, Nebraska

Gas Pipes Across Rivers Above Flood Danger

SPANNING of treacherous river crossings with suspension bridges to assure uninterrupted service of natural gas trunk lines has been largely pioneered by Lone Star Gas Company, Dallas, Texas. Four main line river crossings that formerly experienced washouts in the wake of heavy floods on the company's system in Texas have proven conclusively the practical and economical value of suspension bridges. Nearly a decade has elapsed since the construction of the first suspension bridge, and new features have been incorporated in each additional project. The latest achievement has been the completion of a suspension bridge used exclusively as a pipe line carrier with a clear span between towers of 1280 feet.

Lone Star Gas Company adopted the suspension bridge as a relief measure from repeated washouts of buried lines in the stream bed for the first time in crossing the Brazos River, near Granbury, Texas. This installation involved an over-all length of 1580 feet, and accommodated an 18-inch carrier in supplying Fort Worth, Dallas and other points with natural gas from the Ranger district. The Red River crossing near Byers, Texas, on the company's trunk line used to transport gas from Southern Oklahoma fields to the above cities in North Texas later was made secure with a suspension bridge, having an over-all length of 2522 feet. A second crossing of the Brazos River at Waco was taken care of with a 749-foot bridge. Red River was bridged a second time with an elevated crossing early last year to protect a 16-inch trunk line. The bridge was located at Sivells Bend, near Gainesville, Texas.

The Sivells Bend bridge required about 7½ months to construct, and is considered a modern type of over-head carrier. It has an over-all length of 1768 feet, with a single span of 840 feet between piers. Two main towers of structural steel, rising to 140 feet, are mounted on concrete piers. Two plow steel cables of 2¼ inches in diameter that support the 16-inch trunk line are strung over the top of each of the towers. These cables are anchored to concrete blocks on each shore.

Protection for the suspended gas line against wind is attained through the use of auxiliary cables forming a wind brace. Two cables of one and three-quarters inches in diameter are secured to each of the shore anchors, and strung on a level and on opposite sides of the pipe. Arms, or cantilever trusses are attached to each of the main towers so as to support these wind cables, thus regulating the distance apart. A network of short cables extends from these wind braces to the short bars supporting the pipe line in midair, with a gradual warp inward taking place as the center point of the long span is approached.

Experience gained by the engineers of the Lone Star Gas Company with the suspension type of river crossing bridges was used to an advantage recently in supervising construction work on all river crossings as well as booster plant installations on the Texas Panhandle-Iowa trunk line system of the Northern Gas & Pipe Line Company, an affiliated concern. The latter concern has a 24-inch carrier extending northeast from the Panhandle gas area, and the flood waters of the Canadian River, near Borger, Texas, have been stripped of their washout menace through the construction of a comparatively low suspension bridge having an over-all length of 3176 feet.

A new record for clear span between towers on a suspension bridge built for a pipe line has been attained in Northern Gas & Pipe Line Company's crossing of the Missouri River between Nebraska and South Dakota at Ponca, Nebraska. This bridge has a span of 1280 feet. It conveys a 16-inch trunk line over the stream, with a safety margin of about 50 feet above the high water mark. The steel towers supporting the suspension cables rest on reinforced concrete hollow piers composed of two caissons each. Pittsburgh Des Moines Steel Company held the contract for building this bridge.

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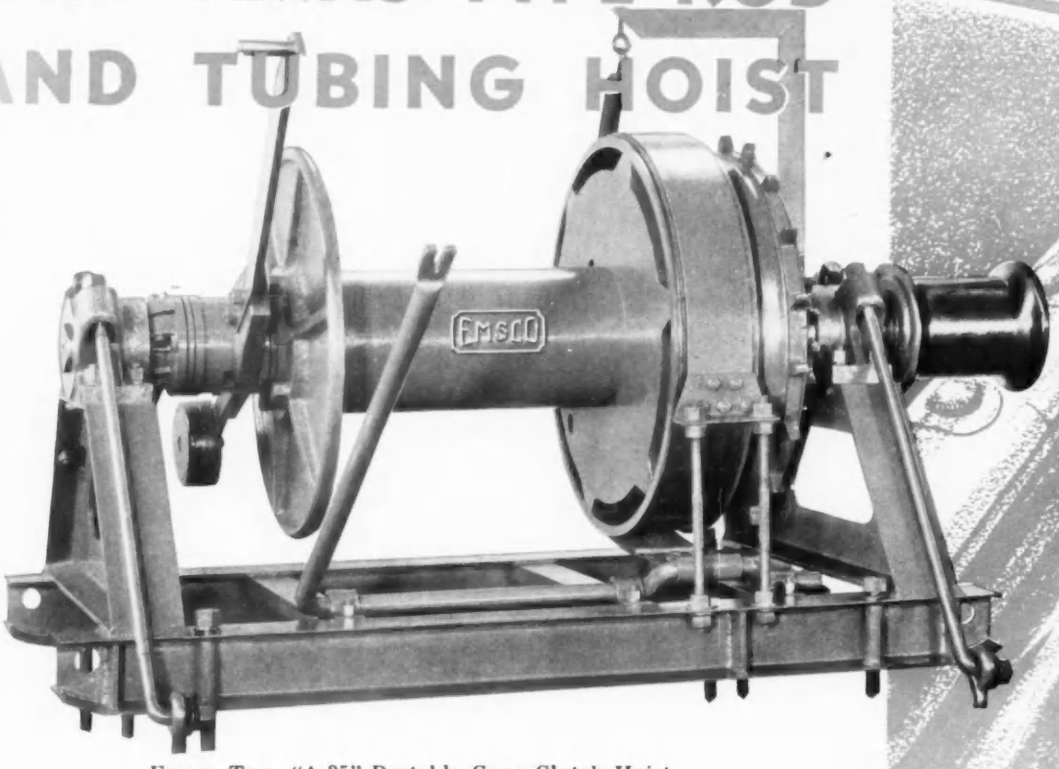

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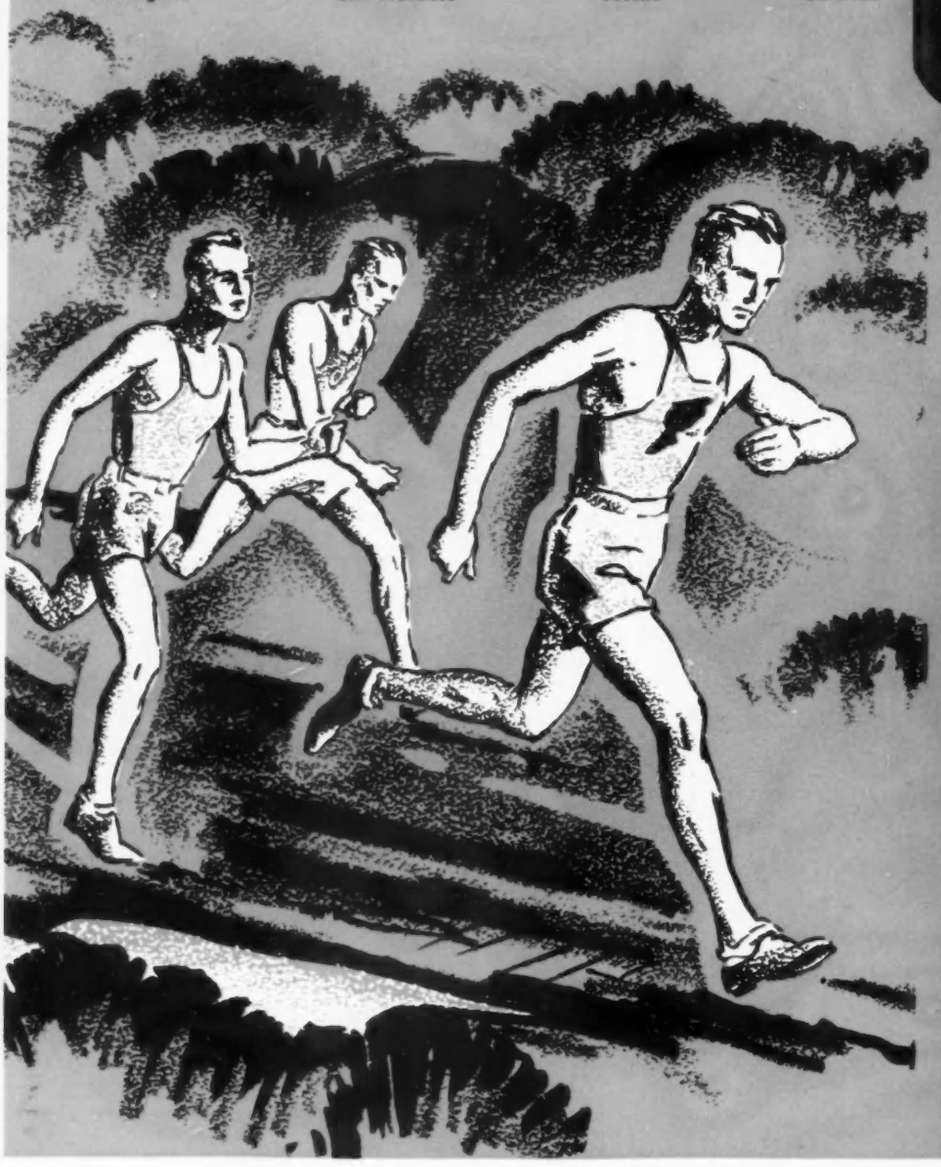

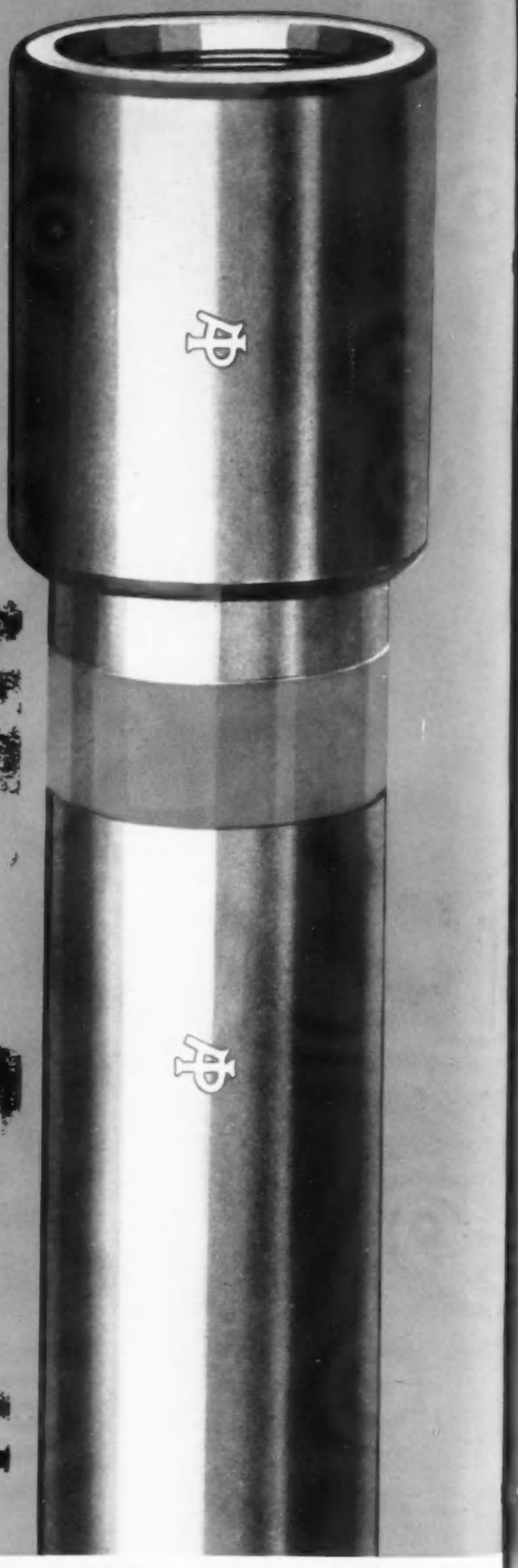

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Fish for Fishing String in World's Deepest Hole. No Wells Finished But 15 Are Drilling at Kettleman Hills.

BRAD MILLS, ***Staff Representative, Los Angeles, California***

Two Kettleman Hills Tests Scheduled to Abandon

Coalinga, Calif.—Kettleman Hills had a quiet week, with no completions, but reports showed 15 drilling wells, two rigs and one new location for the period. Two wells are slated for abandonment.

Standard Oil Company of California announced a location, 41-29J, Section 29-21-17, north part of the field, and is preparing to abandon 25-23Q at 7416 feet.

North American Consolidated's Blauvelt 1, Section 36-21-17, is pulling casing and will abandon at 9500 feet. This test is on the edge of the field and a bad fishing job hastened the decision.

Kettleman North Dome Association's 36-30J, Section 30-29-17, plugged to 8504 feet from total depth of 8699 feet, is standing with 8⅝-inch cemented at 8450 feet. Same concern's 76-34Q, southwest extension in Section 34-22-16, is coring at 8412 feet.

North Kettleman Oil & Gas Company's Lillis-Welch 1, Section 24-21-16, found Bentonite marker at 7720 feet, and is drilling ahead, with expectation that Temblor will be found shortly.

Powell-Stockton Investment Company's Courtner 1, wildcat in Section 32-22-19, cleaned out to bottom, 7574 feet, and is waiting for tubing.

Petroleum Securities Company's Burbank 1, total depth 9332 feet, is waiting for new master gate with hole bridged at 5170 feet.

Standard Oil Company's No. 6-29V, total depth 8406 feet, is fishing at 5849 feet. String of 8⅝-inch was cemented at 7513 feet.

Potrero Well Makes Higher Than Average Gravity Oil

Los Angeles.—Wilshire Oil Company's Potrero Country Club 2, Potrero field, was completed August 1 for about 1000 barrels of 51 gravity oil at 3842 feet. Cut first day was only seven per cent mud and emulsion, and flow was through 1½-inch bean, with 2½-inch tubing at 3000 feet. The tubing pressure was 400 pounds, with no report on gas output. Casing was cemented at 3815 feet about three months ago and work suspended until a few days ago.

Wilshire Oil Company is working over Potrero 1 in the same field, it having been drilled to 5283 feet and then plugged back to 3638 feet, where a string of 10¾-inch was cemented. Production test is set for the next few days. Potrero 3 is also drilling ahead at about 3820 feet in sand and hard shale.

Wells in this erratic field usually come in for a fair initial, but soon water breaks in, and the flow is reduced fast. The gravity of oil usually ranges around 45.

Fruitvale One of Busiest Spots in California

Bakersfield, Calif. — The Fruitvale field is one of the active fields in the state at this time, with six drilling wells, four production tests under way, two new wells preparing to spud and two locations reported for the week.

Western Gulf Oil Company's Bittle 1, Section 21-29-27, which was drilled to 3980 feet, and plugged to 3827 feet, is being placed on production, and Western States Petroleum Company's Unruh 1, Section 21-29-27, was deepened to 4048 feet, and is being cleaned out for production test. Liner with 111 feet of perforated was landed on bottom and cemented.

Petrol Production Company's Bloemer 1, SE Section 21-29-27, swabbed mostly water at 4025 feet, with some oil, and only flows by short heads. Due to its bad performance, Western Gulf Oil Company is to abandon rig for Schmidt Community 1, offset to north.

Mohawk Petroleum Company is preparing to drill and Seahawk Petroleum Company has made a new location, both in the Fairhaven area.

World's Deepest Wildcat Test Having More Trouble

Los Angeles.—Another mishap at Western Gulf Oil Company's Bradley 1, wildcat near Santa Maria, deepest well ever drilled in the United States, has delayed recovery of drill pipe. The hole had a total depth of 10,276 feet, when 2½-inch drill pipe stuck and was twisted off 1350 feet from top. Drill pipe had been recovered down to 8900 feet, by backing off, with a string of left-hand drill pipe, and the new drill string parted. It is now being recovered.

A string of 5¾-inch is cemented at 5990 feet in this hole and from that point to bottom it is open.

California Surplus Stock Very Slightly Reduced

Los Angeles.—Stocks of all petroleum products in California have declined, June to June, 4,000,000 barrels, in round numbers, with all crudes and fuels showing fairly healthy stock withdrawals, while gasoline stocks are up close to a million barrels.

There also has been a decline in California offshore shipments, but not to the extent many thought, or had expected. Total decline in offshore shipments of all products out of California was 5,272,866 barrels, comparing first six months of 1931 with first six months of 1932, while in same period, gasoline (including natural gasoline) shipments declined only 2,076,139 barrels. During May and June there was a tendency for shipments to show an increase over similar months last year, and it is expected that during the last six months of this year, shipments will exceed total for last six months of 1931.

Here is the story of California, all petroleum stocks, comparing six months in 1931 with similar months in 1932:

	All Oils—in Bbls.	
	1931	1932
January	180,034,312	170,444,054
February	178,939,838	171,582,190
March	177,611,522	170,488,987
April	177,152,365	171,376,783
May	175,712,300	171,748,961
June	173,416,314	169,432,058

Heavy crude stocks, including all grades of fuel oil, at the end of June, 1931, totaled 104,416,375 barrels, but at the end of June, 1932, this total had declined to 100,053,802 barrels. Light crude stocks in June, 1931, totaled 42,521,954 barrels, against 40,836,891 barrels end of June, this year. Gasoline stocks, including natural gasoline and engine distillates, totaled 15,588,862 barrels end of June, 1931, against 16,554,338 barrels end of June, this year.

Stocks are expected to continue to decrease during the balance of this year, due to the fact that production of crude is expected to hold around or below the present figure, while shipments are expected to hold up to a figure

slightly in excess of last year, similar period. The gasoline stock situation is not so good, but probably will be improved. As authorities gradually get a better grasp of the situation, there will be less crude thrown on the open market, and small tea pot refineries will gradually fade from the picture.

The offshore shipment situation is not bad, comparatively speaking, and it is expected California will hold her present markets. In compiling shipment figures, reports of the Bureau of Mines are used, and shipments up and down the Pacific Coast are not taken into consideration, as it is felt that this movement is into California's natural trade territory. These figures also include water shipments only, and tank car movements into adjoining states are not included.

Here is the story of the offshore movement of all oils and gasoline, including natural gasoline, out of California for 18 months past, in barrels:

1931	All Oils	Gasoline
January	6,006,131	2,521,469
February	5,755,404	2,536,064
March	5,755,691	2,698,885
April	5,544,244	2,825,138
May	5,936,582	2,736,689
June	5,100,564	1,943,934
Six months total	34,098,616	15,262,179
July	5,464,379	2,355,818
August	5,146,284	2,135,223
September	5,528,787	2,919,263
October	4,669,093	1,807,318
November	4,967,275	2,480,249
December	3,721,561	1,747,477
Six months total	29,497,379	13,445,348
1932		
January	4,588,145	2,193,885
February	3,880,318	1,185,067
March	5,292,297	2,606,826
April	4,539,869	1,907,446
May	5,185,195	2,607,983
June	5,389,926	2,684,833
Six months total	28,875,750	13,186,040

Entrance of Consolidated Oil Corporation into California in a big way will help the offshore movement, due to the fact that California crude has a natural anti-knock quality, which will be in demand in the East to supply the marketing set-up controlled by Sinclair Refining Company. Consolidated Oil Corporation probably will secure complete control of Rio Grande Oil Company by October 1, or very soon thereafter, while complete control of Richfield Oil Company by Consolidated Oil Corporation probably will come by November 1.

Some California major companies have always had a fair export market, and likely will continue this business, as the larger California companies are not interested in a big way in any South American oil field, or country.

Test to 5000 Feet Planned for Dimmit County Area

San Antonio, Tex.—Dimmit County is receiving a test to 5000 feet if production is not found at a shallower depth. The well is Motes-Campbell Company's Denton 1, located on 2224 acres held in fee by this company out of the 32,000-acre Denton Colony block.

Location is 170 feet from the east and 250 feet from the south line of tract 34, block 60, Denton Colony Subdivision 11 miles southwest of Carrizo Springs.

The geology was worked out by R. E. Vandruff, who defines a dome, known as Denton dome, on the same strike line with the Rycade deep production in Maverick County.

Try for Wide Extension of Jacobs Pool Production

San Antonio, Texas.—Further expansion of the producing limits of the recently discovered Jacobs pool, northeastern McMullen County, looms as Jacob, Buzzini and Pickett, Inc., announce that two more locations, Jacob 5-A and 6-A, are to be drilled immediately.

This concern recently made a deal with Etheridge et al for a 1000-foot test (to the regular sand) on the McCowen-Dickinson tract in the Campbell-Berrey survey, Atascosa County, five miles northeast of the field. This is the first of several such deals contemplated by this company in which it will exchange acreage for drilling.

Another interesting test is to be drilled on the Marbach tract in the Stephens Hays survey, McMullen County, by Durbin and Jones.

California Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
FRUITVALE—		
Bankline Oil Co. 1, Fruitvale	450	4044
VENTURA AVENUE—		
Associated Oil Co. 20, V.L.W.	1006	7071
LONG BEACH—		
Beach Pet. Co. 2, Harlow	135	4731

New Operations

SAN BERNARDINO COUNTY — Great American Pet. Co. 1, Gapco 18-2-8; 2 Gapco 18-2-8; 3 Gapco 18-2-8.

MONTEREY COUNTY—Thomas Pet. Corp. 1, Flentge 31-22-14.

DEVILS DEN—A. S. Holloway 1, Miller-Bump 11-25-18.

FRUITVALE—Mohawk Pet. Co. 11, 21-29-27. G. de Bretteville 2, 21-29-27.

Wildcat Drilling Report

(Wells shut down not included)

NORTHERN CALIFORNIA

KERN COUNTY

BLACKWELL'S CORNER — F. Fowler's Lincoln 1, 15-26-19, dr hard sand, 3085 ft.

BUTTONWILLOW — Milham Exploration Co.'s S.P.L. 14-9, tested wet, 2670 ft, recmtd; S.P.L. 21-17, 17-28-23, recemented 2712 ft. Wilshire Oil Co.'s 1A, 7-29-24, Perf. 2220 to 2380 ft, some gas, td 6990 ft.

DEVIL'S DEN—A. S. Holloway's Lincoln 1, 11-25-18, lcn. Pyramid Mills Oil Co.'s 1, 24-25-18, set 8⅝-in at 1480 ft. Tom Hannah's 1, c.o., 3455 ft.

McKITTRICK—H. T. Purman's 1, 22-29-21, suspended 4562 ft. Welport Oil Co.'s 2, 19-29-21, dr gray sand 370 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s 191-1, redrilling 2530 ft, to survey, td 5510 ft. Equity Oil & Gas Co.'s 159-1, fsh 3260 ft.

LOS ALAMOS—Barnsdall's Careago 1, 31-8-33, plugged to 4250 ft, fluid level 2450 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, fsh dr pipe, td 10,294 ft. Deepest hole in U. S.

SANTA ROSA ISLAND—Standard Oil Co.'s 1, dr shale 2300 ft.

VENTURA COUNTY

CONEJO — American Oil Co.'s Powell 1, 35-2-20, c.o. 2040 ft.

HOPPER CANYON—H. A. Bardeen's Lankershim 2-B, 13-4-19, fsh 2757 ft.

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, dr shale 3450 ft. J. Warren Miller's Valenzuela 1, 23-3-24, rig.

SANTA PAULA—E. M. Lesperance's Boosey 1, 31-4-20, rig. J. W. Mosher's 1, 22-4-21, dr 430 ft.

SESPE—Harmon & Deal's 1, 35-5-19, dr 200 ft. H. A. Iver's Star 1-7, 1-4-20, dr red sand 250 ft. Merchants Pet. Co.'s Cochran 6, 1-4-20, rig.

SIMI—Anderson & Hoxie's 11, 36-3-17, dr 1820 ft, showing oil, faulted zone 1770 to 1800 ft.

SULPHUR MOUNTAIN—Wilshire Oil Co.'s Thompson 1, 20-4-21, rig.

TIMBER CANYON—Superior's West 3, 13-4-21, dr 1900 ft.

MISCELLANEOUS

KINGS COUNTY — Kettleman Reef Ridge Oil Co.'s 1, 10-23-16, dr out cement 1150 ft. Mid-California Oil Co.'s 1, 11-23-16, lcn. Knudsen & Schmidt's Avenal 1, standing 5640 ft. Eagle Oil & Gas Co.'s 2, 15-23-20, dr shale 1400 ft. Triune Gas Oil & Land Co.'s 1, 5-23-20, cemented 10¾-in, 300 ft, dr 320 ft.

SAN LUIS OBISPO COUNTY — Emerick Oil Co.'s Holland 1, 22-32-22, dr by lining at 1775 ft. Kent & McDonald's 1, 3-32-22, redrilling 2085 ft, td 2700 ft. Panorama Oil Co.'s Panorama 1, 7-31-21, redrilling 2450 ft, td 4010 ft.

YOLO COUNTY—Pacific Inland Oil Co.'s Guinda 1, 23-12-3, shut in 3050 ft.

SOUTHERN CALIFORNIA

FULLERTON — Orangethorpe Corp.'s Skinner 1, 32-3-10, dr sand and shale 3950 ft.

HAWTHORNE—Nelson S. Hogan's Hogan 1, 23-3-14, dr 200 ft.

HERMOSA BEACH—Tulsa Oil Co.'s Hermosa 2, 6-4-14, sd 3140 ft.

NEWHALL—W. T. Ball's Newhall 1, 34-32-16, dr gray shale 2410 ft. Spencer and Brubaker's 1A, 8-3-16, c.o. 100 ft. Southern California Drilling Co.'s 2-1, 13-3-16, run 385 ft liner, 279 perf, td 1760 ft.

PLAYA DEL REY—Cooperative Development Co.'s 1, 26-2-15, dr brown shale, 4260 ft.

OKLAHOMA FIELDS

Roxana Once Was Deep Oil Production in Oklahoma and Now It's Headed for Still Deeper Drilling.

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Good Producer Indicated in Wewoka-Holdenville Area

Seminole, Okla.—Ute Oil Company's Combs 1, SW NW SE Section 18-10n-7e, approximately four miles northeast of the Greater Seminole area, was drilling below 3790 feet carrying a hole full of water encountered in Cromwell sand topped at 3767 feet. This is an important test because of its location on the apparent Seminole trend and in an area which has been under lease for several years.

Bee Oil Company's Butler 1, CSW SW NE Section 20-9n-6e, in the East Earlsboro extension area, is estimated to be making 2,000,000 cubic feet of gas and 50 barrels of fluid daily from sand at 2741 to 2745 feet. Fifteen barrels of the fluid is water.

Initial performance indicates that Limestone Oil & Gas Company will have a good producer in Walker 2, CNL SE NE Section 15-7n-8e, in the Wewoka-Holdenville area. Eight-inch casing was set at 1106 feet and 107 feet of six-inch liner at 1186 feet on top of the sand which was logged from that depth to 1207 feet. After pulling the big pipe operators had 1000 feet of oil in the hole in six hours and were unable to lower the fluid in six hours of bailing at the rate of 10 barrels per hour.

West Seminole

Amerada Petroleum Corporation's Chase 3, CSW NW SE Section 29-9n-6e, in the West Seminole pool, responded with a flow of 195 barrels in two hours after being shot with 40 quarts. This was the second shot, the first having been a 25-quart charge which resulted in a flow of 995 barrels in 12 hours. Production is coming from 23 feet of Wilcox sand topped at 4069 feet. The company's Chase 5, CNE NE SW Section 29-9n-6e, northwest diagonal offset to Chase 3, encountered top of the Wilcox sand at 4077 feet and was drilling at 4086 feet with nothing showing. This test looks very much as if it will define the northwest limit of production in the West Seminole pool.

Sacred Heart

Stuary Clark et al's Bailey 1, NW NE NE Section 28-7n-4e, in the Sacred Heart area, lost 15½-inch surface pipe in the hole with total depth at 3315 feet. An attempt will be made to set a string of 12½-inch casing to bottom and proceed to test the Wilcox sand.

Roxana Deeper Sand Looks Worth Deepening For

Guthrie, Okla.—Shell Petroleum Corporation's McCully 6, CNE SW SE Section 30-19n-4w, which attracted attention during the week ending July 30, appears to be a real find on the basis of subsequent production tests. On the latest gauge it shows as a 1000-barrel well although it is only four feet in the sand and two feet in the pay. Top of the sand was reported at 6169 feet with first oil at 6171 feet and total depth at 6173 feet. When agitated and slightly deepened it yielded 40 barrels the first hour and 55 barrels the second. Gravity of the oil is 41.5 degrees corrected.

Importance of the find is indicated by the fact that already the owners of two offset properties have announced intention of deepening to the new pay which is thought to be equivalent to the School Land sand in the Oklahoma City pool. Wentz Oil Corporation is moving in tools to deepen Williams 2, NE NE NW Section 31-19n-4w, two locations south and one west of the McCully 6, and J. S. Cosden, Incorporated, was preparing to deepen Gardner 1, west offset to Williams 2.

The old Roxana pool in which this development is located was Oklahoma's first production below 5800 feet and attracted much attention in the Mid-Continent due to its "great depth." Roxana Petroleum Corporation (now Shell Petroleum Corporation) drilled the discovery well on the McCully farm, completing June 28, 1927, at 5984 feet. Initial production was 2450 barrels and maximum production 2885 barrels. Subsequent development proved the upper Simpson to lie at depths ranging from 5800 to 5960 feet and the Wilcox sand between 5983 and 6085 feet. Since that time production has declined to such an extent that most operators will be inclined to deepen to the new horizon provided it proves to be as good as the McCully 6 indicates.

Oklahoma City Active With Larger Than Usual Wells

Oklahoma City, Okla.—Six new wells and a recompletion made the past week one of the most active that the Oklahoma City pool has seen in several months. This was true especially in regard to size of completions; three of the wells have 24-hour calculated potentials in excess of 50,000 barrels. The outstanding performance was reported from Phillips Petroleum Company et al's Calkins 1, CSW NW NE Section 3-11n-3w, which flowed 4849 barrels in 90 minutes, producing through two four-inch chokes against 250 pounds back pressure. Wilcox sand was logged from 6311 to 6477 feet, the total depth. The well was first hooked up with two three-inch chokes and set to produce against 235 pounds. Under this condition it produced 4074 barrels in 2½ hours and was making gas at the gauged rate of 35,471,000 cubic feet.

Although not the biggest completion of the week, Slick-Urschel Incorporated's Terminal 7, a recompletion in CN½ SE SE NW Section 3-11n-3w, furnished considerable excitement when it cut out three gates and was shut in with difficulty. This well originally was completed early in July but after flowing 771 barrels in 14 minutes the hole bridged and operators had to spend almost a month reconditioning it. On July 31 it was opened two hours and 37 minutes for a flow of 3192 barrels through a three-inch choke and against 900 pounds back pressure. On the following day a four-inch choke was installed and back pressure reduced to 500 pounds under which condition the well flowed 1223 barrels in 35 minutes and made gas at a gauged rate of 160,000,000 cubic feet. This gave it a 24-hour calculated potential of 50,400 barrels and placed it among the larger gas producers in the pool. Production is coming from Wilcox sand at 6324 to 6425 feet with total depth at 6429 feet.

The five other completions brought total 24-hour calculated potential to 274,982 barrels.

Russell Petroleum Company's Russell Community 1, CW½ SE NE NW Section 22-11n-3w, which last week looked dangerously like it would be a dry hole in the Wilcox sand, encountered that formation at 6573 to 6580 feet and was flowing by heads at the rate of about 15 barrels each flow. It was being estimated at 300 barrels daily, practically a dry hole from an economic viewpoint.

R. A. Wallace et al's Richolson 1, SE

SW NW SE Section 22-11n-3w, in the same area, had top of the Checkerboard limestone at 5490 feet and cemented nine-inch casing on top of what is thought to be the Cleveland sand at 5770 feet. It is waiting on cement to set with the total depth at 5849 feet. This indicates that operators will test the Cleveland which has yielded nice showings in one or two other tests in the field. Indian Territory Illuminating Oil Company swabbed and flowed 1000 barrels in 10 hours from this same horizon at 5788 feet but was cased off and completed in the Wilcox sand. Other tests in the vicinity have reported showings at about the same depths but I.T.I.O. was first to stop and give the horizon a test.

Slick-Urschel Incorporated departed from usual completion procedure when it shot Wilcox sand with 160 quarts in Classen-Edwards 16, CNE SW SW Section 3-11n-3w. Wilcox sand was reported at 6430 to 6495 feet. After drilling the plug operators exploded the shot before any bailing had been done and with the rotary mud and water still in the hole. The well was shut in immediately without being allowed to finish cleaning out. So far as can be elarned this is only the second time that operators have shot the Oklahoma City Wilcox sand since it is a soft, very loosely bonded sand throughout most of the area. Several completions on the Classen-Edwards lease have not come up to expectation seemingly due to a relatively tight sand condition of local extent. It will be of interest to note whether Classen-Edwards 16 exceeds its offsets in initial production. In practically all of the remainder of the Oklahoma City Wilcox sand area a shot of this size most certainly would mean that several master gates would be cut out before the loose sand could be disposed of.

Other completions of the week were as follows: Slick-Urschel Incorporated's Classen-Edwards 13, CNL SE NE SW Section 3-11n-3w, Wilcox sand 6323 to 6435 feet, initial production 5145 barrels in two hours; Mid-Texas' Vaughn 1, SW SW SW NE Section 15-11n-3w, Wilcox sand 6379 to 6514 feet, initial production 316 barrels in 13 minutes and an estimated 75,000,000 cubic feet of gas; Slick-Urschel Incorporated's Classen-Edwards 15, CE½ SE NW SW Section 3-11n-3w, Wilcox sand 6390 to 6496, initial production 5181 barrels in eight hours with gas at the gauged rate of 22,342,000 cubic feet; Harper-Turner's Alvah 1, NE SE SE NW Section 22-11n-3w, Wilcox sand 6502 to 6560 feet, initial production 392 barrels in one hour and four minutes with an estimated 30,000,000 cubic feet of gas; and J. C. Shaffer et al's McKee 1, SE NW NE NW Section 3-11n-3w, Wilcox sand 6311 to 6460 feet, initial production 1625 barrels in 1½ hours flowing through a 3¼-inch choke against 250 pounds back pressure. Gas was estimated at 30,000,000 cubic feet.

Oklahoma Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Schermerhorn Oil Co., Cox 9, ne sw se 23-4s-3w	20	1121
CREEK COUNTY—		
S. W. Anthony, Warlecy 1, se c 4-16-12e	¶½	1890
Smith and Wood, Harjo 1-A, se c ne 6-18-10e	15	1401
Gled Oil Co., Koch 10, se c ne 20-19-9e	80	2283
Gled Oil Co., Bible 1, swc 21-19-9e	*	2235
Johnson O&R, Rentie 1, ne c sw se 32-19-9e	¶4½	2075
GARVIN COUNTY—		
Malernee O&G, Walker 1, ne c sw 24-2n-2w	*	4830
HUGHES COUNTY—		
Redwine et al, Robinson 3, nwc se sw 15-5-11e	¶2	1267
Mid-Continent Pet. Corp., Jacobs 1, ne c nw se 9-7-8e	600	2934
LOGAN COUNTY—		
Blackwell O&G, Quigley 1, ne c sw sw 21-18-4w	*	4029
MUSKOGEE COUNTY—		
Allred et al, Drew 1, nwc ne 17-13-16e (owdd)	¶8	2058
E. Price, Warner 1-A, se sw sw sw 13-14-16e	25	1525
OKFUSKEE COUNTY—		
Burke-Greis Oil, Grayson 3, nwc ne se 32-12-10e	¶24	3577
Keaton & Gold, Taylor 2, ne c nw nw 18-12-11e	*	2905
OKLAHOMA COUNTY—		
Champlin et al, Central 6, swc nw se 3-11-3w	785 4 hrs.	6325
Slick-Urschel, Inc., Classen-Edwards 13, se c ne sw 3-11-3w	6358 3 hrs.	6535
Swasteka Drlg. Co., Harper-Turner 1, nwc ne ne se 22-11-3w	1253	6525
OKMULGEE COUNTY—		
Bryan Pet. Co., Cowbray 1-A, se c sw 23-14-14e	*	1030
Dodge Bros., Herrod 1-A, se c ne se 17-15-14e	10	814
Dodge Bros., Herrod 2-A, nwc ne se 17-15-14e	4	814
PONTOTOC COUNTY—		
Fleetborn Co., Brown 2, se ne ne 28-5-6e (owdd)	¶1	1760
Vanderslice, Bolan 3, ne c sw sw 17-2-4e	5	287
Vanderslice, Meredith 1, ne c sw 17-2-4e	5	308
Stanolind O&G, Roper 4, se c ne nw 32-5-5e	160	2496
Barnsdall Oil Co. et al, Hart 2, nwc sw nw 27-5-6e	12	1548
Fleetborn Oil Co., Norris 1, ne c 28-5-6e (owdd)	360	2442
SEMINOLE COUNTY—		
Mid-Kansas Oil & Gas, Davis 6, nwc ne nw 30-8-8e	110	3795
Spears Drilling Co., Phillips 1-A, se c ne sw 17-9-6e	*	2855
STEPHENS COUNTY—		
Western Oil Co., Palmer 1, ne c nw se 31-1s-8w	*	2863

New Operations

COAL COUNTY—Flynn et al, Miller 1, se c ne 10-2-8e, (owdd).

CREEK COUNTY—Wallace et al, Bartlett 1, nwc se se 3-15-7e. Johnson Oil Ref. Co., Carolina 1-A, ne c nw 1-19-9e. Vensel et al, Cheatham 1, swc 32-19-9e. Anthony et al, Muskogee 1, cnl se ne ne 9-16-12e. Johnson Oil Ref. Co., Evans 3, swc se nw 29-19-9e.

HUGHES COUNTY—Head Pet. Co., Breeding 1, se c ne ne 12-7-8e, location abn. Tate & Perkins, Graham 1-A, ne c sw sw 23-7-8e.

LINCOLN COUNTY—W. K. Henry, Strip 1, se se nw 1-15-7e. Kemp & Nunnally, Baker 1, swc se ne 26-17-6e.

MUSKOGEE COUNTY—Mack Drilling Co., Barnett 2, nwc sw ne 36-16-15e. Allred et al, Drew 1, nwc ne 17-13-16e.

OKMULGEE COUNTY — Wood Oil Co., Smith 1-A, ne c sw ne 4-14-12e. Hazlett et al, Burton 1-A, se c 25-14-12e. Misener, Morris 1-A, ne c nw nw 21-14-14e (twin). Home O&G, Anderson 1-A, se c ne ne 2-15-14e. Dodge Bros., Herrod 3-A, ne c se se 17-15-14e.

OSAGE COUNTY—G. M. Buchner, 1, swc 6-26-9e.

PONTOTOC COUNTY—C. P. Williams, Kroth 1, ne c se 23-3n-4e.

PITTSBURG COUNTY—Tate Oil Co., Fulton 1, se c 34-7-14e (owdd).

POTTAWATOMIE COUNTY—W. S. Weldon, Weldfelt 1-A, ne c se ne 3-7-4e. James et al, Garrett 1, se c nw 28-7-4e. Huckleberry et al, Spaulding 1-A, nwc 35-8-4e (twin). W. M. Null, Brandenburg 1, nwc sw sw 35-8-4e.

SEMINOLE COUNTY — W. G. Johnson, No. 1, swc se nw 29-6-6e. R. D. Donnelly, Shepard 1-A, ne c se ne 4-8-8e. Amerada-Stanolind, Chase 6, ne c se sw 29-9-6e.

STEPHENS COUNTY—Wilie et al, Cates 1, ne c sw sw 15-1s-8w. Dun-Mar et al, Lang 1, se c ne ne 16-2s-6w. George Pace, Watkins 1-C, se nw sw 22-2s-7w. W. H. Smith, Ridgeway 1-A, sw ne se 17-3s-4w.

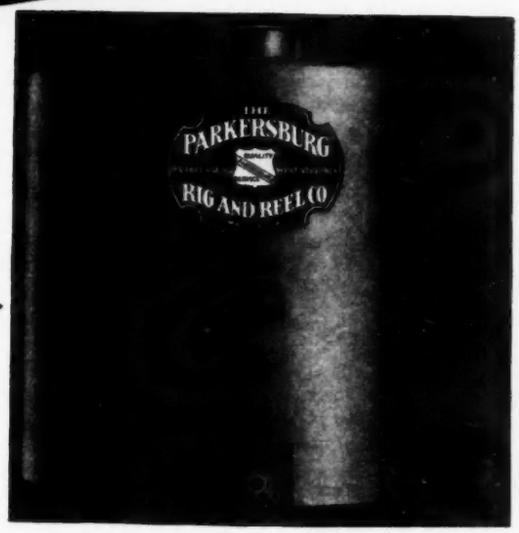
WAGONER COUNTY—C. Lambert et al, 1, ne c se se 22-18-15e.

Oklahoma City Allowable Remains Above Demand

Oklahoma City, Okla.—Although pipe line nominations totaled only 79,715 barrels daily from the Oklahoma City pool during August the Oklahoma Corporation Commission extended its order of July 11, 1932, which governed during the last 16 days of that month. Due to vacations which members of the commission plan taking this month, allowable production for the Oklahoma City pool is set for the entire month instead of for a 15-day period as has been the practice for the past several months. The extended order permits a daily production of 87,350 barrels, 7635 barrels in excess of the indicated demand for August but 4554 barrels less than the daily average runs for the period July 15 to 25. Several purchasers seem to follow a plan of nominating less than they actually intend taking and this practice may have influenced the commission to allow an amount greater than the indicated demand. Further hearing has been set for August 29, 1932, at which time September demand for the Oklahoma City pool will be determined.

As a further action in clearing up difficulties encountered in prorating the Oklahoma City pool the commission rescinded its order which had been intended to require potentials on all which have not been gauged subsequent to October 10, 1931, at which time the field was reopened after a military shut down of about 75 days. Several operators had pointed out

Positive Protection



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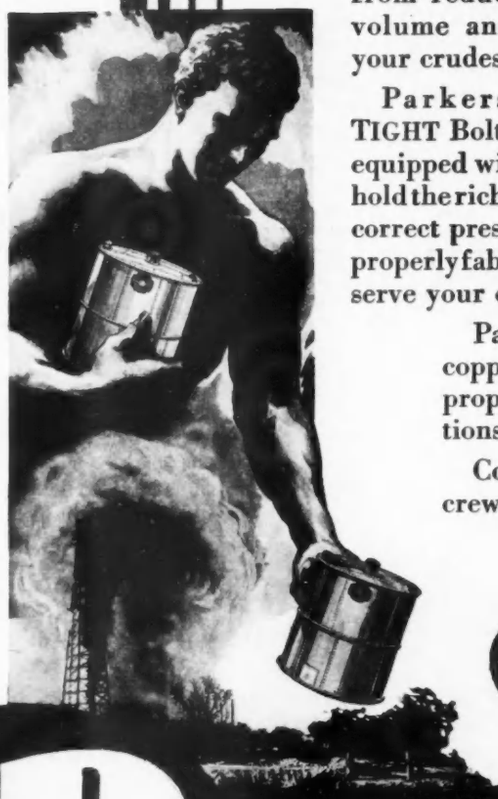

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that the order had not been worded so as to fully accomplish the intent of the commission and it was voided to enable that body to issue a clarifying order. Under a new order operators are required to take potentials on all wells which have not heretofore been officially gauged subsequent of October 10, 1931, except those which may have become overproduced under the time proration plan and are now making up such overproduction in accordance with the time proration plan and all wells now shut in serving the 65-day shut down time. Potentials are to be taken on or before August 15, 1932.

During the past month it is understood that 10 or more wells in the pool were without connections but Col. Cicero I. Murray, in charge of military proration, is said to have reported that all wells are now connected except perhaps for a few of those completed within the past few days.

Several employees of Marshall Oil Company are reported as having entered the field and attempted opening its wells for production with the result that all are placed under arrest by the military authorities. After being held for a short time they were released with the promise that further attempts in this direction would bring more stringent action both against the company and its employees. Properties of the Marshall Oil Company are shut in under citation for contempt of proration orders.

Curtailment of Oil Production No New Thing in California
(Continued from page 16)

where the total production or the total potential of the field is declining. The system works well in such cases. As the potential of each operator declines, he still receives his flat quota per well plus the same percentage of his remaining potential. Obviously, as the potential of the field declines, and the operator's potential declines, the application of the same quantity of oil per well and the same percentage of his remaining potential means that there is a certain shrinkage in the amount of oil he is allowed to produce; hence the quota of a field while remaining fixed is not produced, so that the actual production declines gradually. A spread develops between the total of the individual allotments of the operators and the fixed allotment of the field. In the most recent curtailment efforts, this spread is not being reallocated within the field.

The method of graduated oil curtailment means that the small well is protected at the expense of the large well and that the operator having a large well holds back his production in order that his neighbor may get a larger share of the oil. The effect of the method is to permit the marginal wells to continue to produce as long as they can. As a conservation method in causing all recoverable oil to be produced, the graduated oil curtailment method now in vogue can be regarded as successful. Hence in these marginal wells this method permits a barrel of oil to be produced without earning a profit for the owner of the property, and thus this barrel of oil prevents other profitable barrels of oil from being produced elsewhere. In the sense that such operation furnishes work for more labor during the depression by keeping the small wells alive for a longer period, the method may also be called successful.

Oil curtailment has not reached the perfect stage as yet and therefore while one may not be able to forecast the trend of changes, it is safe to say that other modifications in method will be developed.

Seminole Runs Decline and Allowable Is Reduced

Seminole, Okla.—Demand for crude in the Seminole district dropped from 4,338,876 barrels in May to 4,140,326 barrels during June, a decline of 198,550 barrels and a daily average reduction of 6618 barrels in pipe line runs. August potentials total 323,038 barrels as compared with 329,862 barrels as of July 1, a decline of slightly over two per cent despite the fact that two new areas have been added into the figure for August 1. The Sacred Heart pool with four wells was granted a potential of 1698 barrels based on a 10-day open flow test which was recently completed. For proration purposes this area is added to the St. Louis pool and prorated to about 44 per cent of the potential. West Seminole, with four partially developed leases, has an August 1 potential of 8237 barrels, based on a 10-day test, and is given a total allowable of 86,545 barrels for the month.

Status of the Seminole District as of August 1, 1932

Pools—	June Allowed Pipe Line Runs	June Total Actual Pipe Line Runs	August Potential	August Net Allowed Pipe Line Runs
Allen	249,304	249,474	18,209	254,857
West Asher	120,630	111,305	9,535	111,531
Bowlegs	343,509	343,253	26,243	358,083
Carr City	320,143	306,009	24,840	308,781
Earlsboro	356,513	352,364	23,864	359,564
East Earlsboro	271,101	247,037	19,358	269,264
East Earlsboro Extension	5,688	7,443	531	5,488
South Earlsboro	90,464	85,185	6,642	81,715
Earlsboro Townsite	51,314	48,754	3,538	50,490
Fish	105,294	119,044	34,744	67,195
Konawa	151,764	143,885	11,194	147,743
Little River	521,544	515,079	39,940	548,300
East Little River	60,903	49,955	3,328	53,771
Maud	48,192	35,393	2,068	39,672
Mission	195,245	189,231	15,581	214,847
Sasakwa	50,756	48,413	2,410	48,232
Searight	100,681	100,581	6,683	101,500
Seminole	331,607	327,985	24,209	336,827
East Seminole	33,943	34,231	2,370	34,608
West Seminole	82,553	89,295	8,237	86,545
St. Louis	528,473	502,848	34,442	533,273
Wewoka Townsite	120,705	84,624	5,102	78,316
Totals	4,140,326	3,991,388	323,038	4,090,602

First of Ten Gas Wells at North Casper Creek

Casper, Wyo.—Lakota Oil & Gas Company, operator in the North Casper Creek field 25 miles northwest of Casper, reports completion of its No. 6 on Section 36-36-82, for an estimated open flow of three to five million cubic feet of pure, sweet gas. Rock pressure is 227 pounds. This is the first well to be completed in the program of 10 to be drilled by the company with the idea of developing a supply of natural gas adequate to the needs of the city of Casper, which contemplates taking over the municipal distributing system from New York Oil Company.

Sun Oil Company Moves 1,161,442 Barrels in June

Beaumont, Texas.—Water shipments of crude oil by Sun Oil Company during June from Sun and Sabine Pass terminals on the Texas Gulf Coast amounted to 1,161,442 barrels, all being coastwise traffic.

how many BITS *to drill a Well*

When you set and face your tools with Haystellite and Composite Rod, you automatically reduce the number of bits necessary to drill your well. The following records from East Texas fields prove that bits set and faced with these wear-resisting alloys make greater footage per round trip:

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KANSAS FIELDS

Commission Defers Decision on Request for Disregard of Ratable Taking Rule in Stoltenberg Area.

FLOYD SWINDELL, ***Staff Representative, Tulsa, Oklahoma***

Five Kansas Wildcat Tests At Interesting Stages

Wichita, Kans.—Five tests, all in wildcat or semi-wildcat territory, commanded principal attention of Kansas oil men during the week. Slick et al's Breford 1, SW SW NW Section 7-17s-10w, five miles from production in the Barton-Ellsworth Arch area, was plugging off the last three feet of sand in the belief that it is dry and absorbing oil from the upper part of the horizon. After cleaning out and swabbing, oil built up to about 1800 feet in four hours but when the hole was deepened 3½ feet the fluid started dropping, indicating possible absorption by the lower portion of the sand. Top of the Kansas City-Lansing group was encountered at 3045 feet, gas sand from 3055 to 3075 feet, and oil pay from 3140 to 3155½ feet. First production was 225 barrels in 16 hours made between the eight- and 10-inch strings around a faulty casing seat. The eight-inch casing was then lowered and cemented at 3045 feet. No gauge is available since recementing the pipe.

Slick et al's Orth 1, CSE SE NE Section 27-18s-10w, northwestern Rice County, was placed on the pump and produced 150 barrels in two hours, pumping at 35 strokes per minute and with a 52-inch stroke through three-inch tubing set five feet off bottom. On its second test the well made 815 barrels in 10 hours and shut in. Production is coming from Arbuckle "Siliceous" limestone topped at 3236 feet and drilled to 3243 feet. The upper five feet were barren of oil and gas.

Skelly Oil Company was trying to free frozen five-inch casing in Leisman 1, CSE SW Section 20-27s-10w, interesting extension test in the Miles area of northwestern Kingman County. Top of the Simpson formation was reported at 4004 feet and five-inch casing originally was set on formation at 4077 feet. Slightly below the casing point operators encountered a badly caving sandy shale which froze the casing at 4079 feet. Arbuckle "Siliceous" lime was logged from 4093 to 4094 feet with nothing showing at the latter depth. When the five-inch casing has been freed it will be lowered and set on top of the Arbuckle.

Skelly Oil Company's Melchant 1, CNW NW SW Section 6-17s-9w, several locations east of production in the Holyrood area, was deepened 1½ feet to 3295½ feet, where it had 400 feet of oil standing after being shut in 48 hours. When reopened it started making one bailer of water per hour which the operators thought was coming from behind the pipe. Production seems to be coming from one foot of the lime between 3293 and 3294 feet, although the pay was reported from 3291 to 3295½ feet. Walls of the hole did not stand up well and a six-inch liner was set at 3279 feet but this move was unsuccessful and the liner was reset. Latest reports say that water broke in and that the hole was rapidly filling. It will be plugged back to 3295 feet and probably given a light shot. Apparently operators have decided that source of the water is from the bottom of the hole instead of from behind the casing.

Gled-Skelly and Shell's Franz 1, CNW NW Section 2-24s-4w, in the Goering or Blake area of northwestern Reno County, flowed 210 barrels in six hours and 20 minutes, of which 115 barrels were oil and 95 barrels were water. Production is coming from Mississippi lime drilled to 3495 feet after topping chat at 3280 feet. The well will be completed at 3495 feet.

Shell Petroleum Corporation et al were coring below 3234 feet in No. 1, CNW NE Section 4-19s-9w, three miles north of the Heiken area in Rice County. No siliceous lime had been encountered. Later reports show Simpson green shale at 3237 to 3260 feet and a saturated sand from 3260 to 3261 feet, the total depth. Six-inch casing is set at 3253 feet.

Derby Oil Company et al have announced location for No. 1, NE SE SE Section 21-16s-10w, in the Stoltenberg area of southwestern Ellsworth County.

Commission Delays Ruling On Stoltenberg Proration

Wichita, Kans.—The Kansas Public Service Commission has deferred action on the petition of Vickers Petroleum Company to purchase oil from its own wells in the Stoltenberg area without taking ratably from other wells which are now shut in without a market. The company's petition is based on a plea that the wells are being damaged through migration of salt water. Granting of this privilege would be contrary to fundamental rules of proration as practiced in other states which strive first to insure ratable taking from wells within a pool and equitable apportionment of state allowable among the pools.

Under the Oklahoma Conservation Act of 1915, the corporation commission is given the power to apportion outlet among the pools of the state but that body has not been entirely successful in this matter since the amount of oil that any certain purchaser will take from a given area or from the state rests entirely upon the discretion of that purchaser. Oklahoma City operators have made several attempts to secure a reduction in allowable production in the Seminole district with the object of applying that reduction to increase allowable in the Oklahoma City pool. At the present time the Seminole district has a daily allowable of 129,021 barrels as compared with 87,350 barrels for the Oklahoma City pool.

Kansas Field Developments

Completions

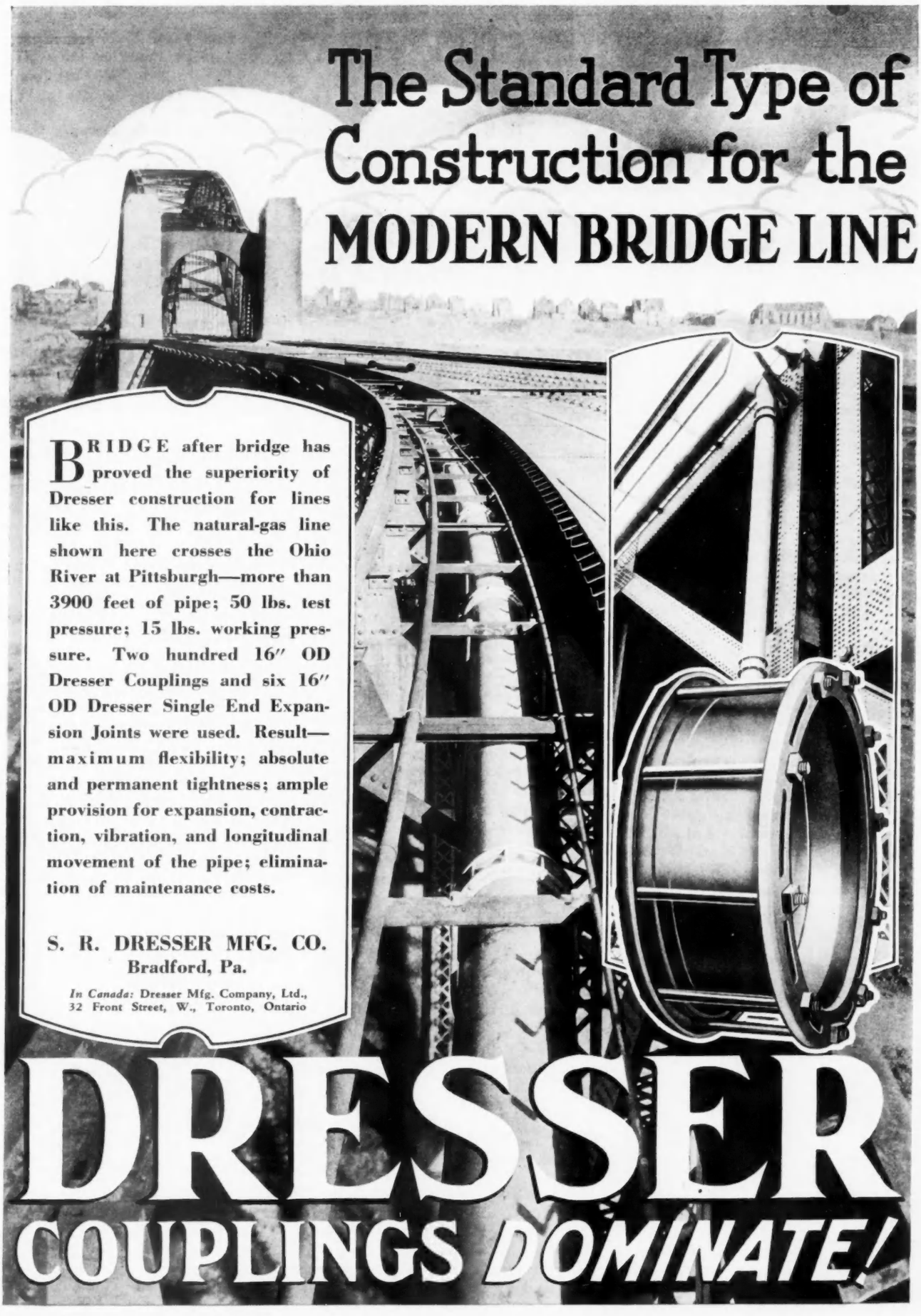
Company, Well and Location	Initial Production Bbls.	Depth
COFFEY COUNTY—		
Dewyer, Mentzer 1, swc nw sw 33-22-15e	*	1540
COWLEY COUNTY—		
Deal Oil Co., S. W. College 1, swc ne se 22-32-4e	125	2385
McMarow, Gaylon 1, nwc ne ne 27-32-4e	50	2396
ELLSWORTH COUNTY—		
Gypsy Oil, McKinley 1, nwc sw nw 6-17-9w	*	3350
GREENWOOD COUNTY—		
Sinclair-Prairie, Davis 1, nwc se se 6-24-12e	137	1728
A. M. Landon, Smith 1, nwc sw nw 8-24-12e	440	1731
HARVEY COUNTY—		
Lauck et al, Krehbiel 1, nwc ne sw 9-22-3w	*	3804
McPHERSON COUNTY—		
Lario O&G, Boals 3, ne c nw 24-19-2w	1970	3412
Magnolia Pet. Stucky 1, ne c se ne 28-20-3w	*	3553
Derby Oil, Neufeldt, nwc sw se 21-21-3w	240	3140
RUSSELL COUNTY—		
James Brennan, Walz 1, nwc 29-13-11w	*	60
Billingsley, Witz 1, swc nw se 4-14-15w	120	3402
WOODSON COUNTY—		
Theta Oil, Shaffer 1, swc se 31-23-14e	300	1576

New Operations

COWLEY COUNTY—Dickey Oil, Smiley 1, ne se nw ne 27-32-4e. Witt, Bives 1, sw se sw ne 27-32-4e.

ELLSWORTH COUNTY—Viking Oil Co., Satran 1, swc 5-14-9w.

GREENWOOD COUNTY — Mathew-Rex,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Reser 2, ne sw ne ne 7-24-12e. A. M. Landon, Smith 2, cel sw ne 8-24-12e.

HARVEY COUNTY — Frost-Study et al, Martens 1, ne se se 19-22-3w. F. H. Hollow, School lot 1, ne se 19-22-3w. Herndon & Blair, Santa Fe 1, c nw sw 19-23-1e. Olson & Shell, Krehbiel 2, cnw sw 19-23-3w. Olson & Shell, Nelson 1, c nw nw 30-23-3w.

McPHERSON COUNTY—Darby Pet. Corp., Doane 1, nwc 28-19-1w. Perry et al, Blair 1, se nw, 32-19-1w. Lario & Shell, Gratton 3, se sw sw 24-19-2w. Breslin, Hill 1, se c 27-19-2w. Garden et al, Decker 1, nw ne nw 11-20-3w.

RENO COUNTY—Olson, Fast 1, c ne ne 25-23-4w.

RICE COUNTY—Rodgers, Rainey 1, se c ne sw 3-21-6w.

RUSSELL COUNTY—Billings et al, Mermis 1, nw ne 9-14-15w.

WOODSON COUNTY — Ward McGinnis, Shaffer 2, sw ne sw 31-23-14w. Theta Oil, Schaffer 2, swc nw se 31-23-14e.

Expect Increase Flow When Blake Area Well Deepens

Wichita, Kans.—Olson Drilling Company and Shell Petroleum Company's No. 1, CSW SW Section 24-23s-4w, in the Blake area of northeastern Reno County, was heading about every 45 minutes and yielding 35 to 40 barrels each flow after drilling the plug to 3347 feet. Top of the chat was logged at 3262 feet and eight-inch casing set at 3337 feet. The well is making an estimated 1,500,000 cubic feet of gas. Initial production more than likely will be materially increased when the hole is deepened.

Sumner County Well Fills With Water and Abandons

Wichita, Kans.—Gypsy Oil Company is abandoning as dry Williams 2, SW SE NW Section 16-35s-3w, in the State Line pool, approximately three miles southwest of the town of Caldwell in Sumner County. Wilcox sand was topped at 4847 feet and the hole immediately started filling with water at the rate of 600 feet an hour. Top of the sand and total depth are the same.

Second Deep Sand Prospect for Victoria County Pool

San Antonio, Texas. — Victoria Oil Company cored a sand at 5831-41 feet in G. Keeran 2, Victoria County, and is setting casing preparatory to completion. The well showed six fourbles of oil and 150 pounds pressure in 2½ minutes on a drill stem test.

The well is 1500 feet east of Keeran 1, M. De Leon Survey, discovery well of the territory, which made a producer from 5182-91 feet; Keeran 2 tested salt water at this level and was carried deeper.

Should the new well make a producer, it will establish a second deep horizon for the Keeran pool.

EAST CENTRAL TEXAS

East Texas Decline Contemplates Proration Revision; Kilgore Area Well Cuts Four Per Cent.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Continued Decline in East Texas Operations

Tyler, Texas.—A decline in field operations for the third consecutive week was sustained by the East Texas oil field during the week ending August 5 when new locations amounted to 105 or 14 less than the previous week. Major companies and independent operators are contributing to this decline which can be traced to three causes. Semi-monthly reductions in the well allowable is an outstanding factor, while the exhaustion of regular locations on many properties is also responsible, then some operators and companies anticipate the early adoption of a revision in the proration plan to prorate leases on a basis of acreage content of a property and number of wells on same discontinuance of the present well basis of proration will probably have to occur before the incentive to continue drilling is eliminated.

Completions situated along the edges of the East Texas oil field furnish the only exceptions to the monotonous grind of chalking up a big quota of new wells each day. New wells within the main section of the field register large potentials, and go on the proration allowance, except for violators' properties, immediately after flushing the hole of drilling fluid. These wells have no particular importance other than the aggregate forcing the field's allowable to lower levels at semi-monthly intervals. The edge wells offer something different in the way of adding new territory, or occasionally make only pumpers, then a few make water at the start of production.

Oil production on the extreme south end of the field was widened one location by Mid-Kansas Oil & Gas Company's Cora L. Graham 2, account 1, making 10 barrels of pipe line oil per hour from sand at 3640-42 feet, with the hole bottomed in shale at 3644 feet, or 3315 feet below sea level. It is located on a 320-acre lease which recently yielded a small gasser in the southeast corner, and is also a south offset to Sun Oil Company's A. Lee 1. The latter is flowing 30 to 40 barrels of pipe line oil daily at a sub-sea depth of 3312 feet. The performance of these two wells indicate that they are on the ragged end of the oil area.

Second Fire

Lee Davis of Fort Worth and associates' A. Kelly 1, located on a 21-acre lease in northeast corner of Cherokee County, and offsetting production, caught fire July 30 while completing initial gauge, making the second well fire in as many weeks. The flames were smothered out after five days through the injection of water under pressure through the tubing.

Water appeared in Sun Oil Company's E. W. Barker 2, which was reported last week as having been a successful completion near the known water zone on the west edge of the original Kilgore area as soon as the well was placed on regular production. It was completed in two feet of sand at a sub-sea depth of 3321 feet, making 10 barrels per hour through 20/64-inch choke. The well began cutting four per cent after the initial gauge. Webb Petroleum Company disregarded a dry hole and the pressure of water wells in between its M. R. Terrell 1 and the field proper, and tested salt water in sand at 3694-95 feet, or 3320 feet below sea level. This failure is on a 21-acre lease in the northeast portion of the W. R. Cooke survey, A-163. R. C. Lipscomb of Tyler and others fared better in venturing out on the west edge of the Kilgore area in drilling a test in the northeast corner of the S. Jackson 25-acre lease, Peter W. Holmes survey. Jackson 1 cored sand at 3706-08 feet, or 3316 feet below sea level, and made a commercial producer free of water.

Water Forces Pumping

Water intrusion has killed the natural flow of Tidal Oil Company's J. E. Choice 1, located in the northwest portion of the W. P. Chism survey, and on the west edge of the Kilgore area, Gregg County, and standard rig is be-

ing installed to pump. This well was completed in June, 1931, flowing by heads, and began making water regularly three months ago.

Magnolia Petroleum Company is the first of the major lease owners in the East Texas field to virtually call a halt on new drilling, having only two rigs running late last week, with 336 completions to show for its past efforts. This company's Marvin Andrews 2, located on lease that straddles the J. Blair and J. T. McDaniel surveys, Kilgore area, Gregg County, was completed making 132 barrels per hour through one-inch choke on tubing from sand at 3591-3601 feet, with 110 pounds working pressure, and 325 pounds closed in rock pressure. The south 39.6 acres of this lease was purchased from Nat Hunter et al in July, 1931, for $1250 per acre in order to forestall competitive drilling then threatened. This is one of the few tracts that Magnolia Petroleum Company bought after the field was generally established, and prices on the up and up.

Corbin-Cupp et al's J. H. Alexander 1, located on the east flank of the Longview area, and east of the Spring Hill community, offers slim chances of making a producer, having encountered about 18 inches of tight saturated sand. This outpost topped the broken sand and shale horizon at 3555 feet, and drilled into Georgetown lime at 3593-3601 feet. The hole filled 250 feet with oil in 12 hours. A shut down order was issued after bailing dry.

A minor extension to the east for the north end of the field is expected from R. L. Martin et al's McQueen 1, located in the northwest portion of the D. Meredith survey, Gregg County, having cored saturated sand at 3608-11 feet. Casing will be set for completion.

A standard rig has been installed on Simms Oil Company and Frank Buttram's W. R. Nicholson 7, located on the south line of the 800-acre lease, M. Mann survey, Upshur County, in order to deepen. This well was completed June 21 in sand at 3717-19 feet flowing 108 barrels oil per hour, but ceased flowing recently. It was not carried a sufficient depth in the Woodbine to afford sustained flowing production. The hole is bottomed at 3310 feet below sea level, and has a safe margin against drilling into bottom hole water.

Sun Oil Company's John Hargraves 6, located in southwest corner of 200-acre lease, M. Mann survey, Upshur County, failed to flow when given swabbing test from sand at 3709- feet. swabbing test from sand at 3709 feet. or 3325 feet sub sea, and standing by for another production test.

Hull Oil Field May Stage Come-Back Soon

Houston.—A faint cry back to boom drilling days in the Texas Gulf Coast was heard this week when old Hull field, like a ghost from the past, showed up with nine operations headed for pay sand and listed two commercial completions. Hull seems trying to stage a comeback, and judging from current field activities, it may do so.

Wells headed for the sand at Hull include: Eclipse Oil Company's Barrow 2, fishing for a swab at 4960 feet while the well flows by heads; Hannah Oil Company's Hannah 1, temporarily shut down at 534 feet; Gulf Coast Oil Company's Finley 1, drilling in sand at 1945 feet after reporting a showing of oil 10 feet above this depth; Houston Production Company's Baldwin 1, standing cemented at 4102 on top of a formation showing oil. Five other operations have built derricks or have rigged up, some to drill new holes, others to deepen or recondition producers.

During the week at Hull, Republic Production Company completed Dolbear 97 for 250 barrels at 2354 feet. D & L Production Company and Bashara completed Pivoto and Hankhamer 1 for 150 barrels at 4688 feet.

Hull field, containing some of the most prolific leases in the Gulf Coast, has rocked along producing about 5000 barrels per day for some time. Present activity in the area indicates at least that the average rate of recovery will be maintained until fall.

Central East Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
JOINER AREA—		
Adams & Lyles, L. P. Thrash (26-ac) 2	3000	3764
American Liberty Oil Co., R. W. Fair-Shell (100-ac) 8	6500	3627
Arcadia Refining Co., J. R. Green (55-ac) 5-A	9500	3749
Blackwell O&G Co., W. P. Moore (33-ac) 7	8000	3639
Bristol & Thompson (was C. E. Rogers), London School (3-ac) 2	8500	3806
Combined Oil Interests, G. W. Eaton 13	11,000	3747
Conservative Oil Co., L. Harmon (33½-ac) 6	9600	3805
Deep Rock Oil Co.-Amerada Pet. Corp., Stovall 12	4000	3660
Duncan & Holt, R. A. Motley (37-ac) 4	4500	3807
East Texas Oil Ref. Co., J. B. Wilson (25-ac) 2	9500	3626
Florence Oil Co., R. A. Motley (25-ac) 1	5000	3817
Walter H. Gant & Garvin, W. P. Moore (70-ac) 1	3000	3603
Gulf Prod. Co., L. P. Thrash (76-ac) 5	9000	3710
John Hooser et al, L. L. Jones (15-ac) 2	7000	3781
H. L. Hunt Prod. Co., W. R. Fair (137-ac) 8-A	8400	3676
Humble O&R Co., S. A. Glover (58-ac) 3	4000	3763
C. J. Thompson (116-ac) 8	10,000	3696
K. O. T. Oil Co., S. S. Cook (6-ac) 3	10,500	3780
Lion Oil Ref. Corp., Wm. Jobe (20-ac) 4	1500	3690
H. R. Merry & Perini, J. M. Price (8-ac) 2-A	6500	3668
Mid-Kansas O&G Co., H.C.&G.W. Burton (148.8-ac) 8	7000	3682
M. M. Cross (815-ac) 25	7200	3620
M. M. Cross (814-ac) 28	8200	3639
C. L. Graham (134-ac) 8, Acct. 2	6500	3708
W. T. Grissom (842-ac) 11	7500	3637
M. Kangerga (65-ac) 4	6000	3668
D. Ledbetter (212-ac) 3	7200	3686
Jim Lunsford (71-ac) 4	7000	3722
J. M. Price (55-ac) 7	2500	3712
H. S. Moss & Pete Urschel, Deason (15-ac) 4	6000	3760
T. W. Murray Oil Co., Darnell 1	5500	3807
Navarro Oil Co., John Bell (5-ac) 1	12,000	3766
Petroleum Marketing Corp., M. M. Barksdale (10-ac) 3	8000	3745
Sinclair Prairie Oil Co., W. D. Kinney 32	8400	3680
W. D. Kinney (579-ac) 33, blk 33	10,000	3660
D. Ledbetter (191-ac) 13	6000	3625
D. Ledbetter (191-ac) 14	2500	3667
Smith County O&G Co., S. S. Cook (50-ac) 2	8000	3722
Smith-Guerin & King, Cook (20-ac) 2	7400	3700
Standard Oil Co. (Kansas), J. E. Wheelis (40-ac) 5	7000	3782
Stanolind O&G Co., R. G. Mason (107.2-ac) 5	7200	3623
Stanolind-Pure Oil Co., R. A. Moores (251-ac) 13	8500	3617
R. A. Moores (251-ac) 14	9000	3636
W. H. Siler (949.6-ac) 8	9200	3663
W. H. Siler (949.6-ac) 16	8000	3634
W. H. Siler (949.6-ac) 17	9600	3634
W. H. Siler (949.6-ac) 18	7000	3677
W. H. Siler (949.6-ac) 21	8500	3655
Sun Oil Co., R. J. Hendon (100-ac) 1	4000	3637
The Texas Co., First State Bank (Overton) (160-ac) 8	9500	3760
A. S. Jarvis (115-ac) 3-B	8500	3682
Allen Kersh (211-ac) 3	6000	3636
Trico Oil Co. (was M. A. Corbin), Motley (20-ac) 2	3500	3781
KILGORE AREA—		
Barnsdall Oil Co., Douglas-Shell (138-ac) 6	9600	3639
Carroll & Baine, Griffin 2	8500	3590
Champlin & Bass, Inc., J. B. Watson (22½-ac) 3	10,000	3596
W. J. Collins et al, H. T. Elder-Republic (3.85-ac) 2	9000	3618
Empire Gas & Fuel Co., C. O. Christian (103-ac) 8	6000	3718
Everts Drl. Co., H. F. Crews (20-ac) 4	6500	3830
Graner Oil Co., P. C. Warren 1	7500	3798
Great Western Oil Corp., F. Birdsong (5-ac) 2	8500	3640
Gulf Prod. Co., H. C. Alexander (209-ac) 13	9500	3543
S. Hilburn (69-ac) 28-C	8000	3643
S. Hilburn (273-ac) 34-E	10,000	3559
A. Spear (82-ac) 16	9000	3550
E. L. Walker (49-ac) 4	6500	3551
Humble O&R Co., J. T. Sexton (137-ac) 6-A	8000	3754
Kirby Pet. Co., J. Reddic 5	5000	3712
R. C. Lipscomb et al, S. Jackson (25-ac) 1	7000	3708
Louisiana Oil Ref. Corp., Wm. Jernigan (110-ac) 2	9600	3710
E. R. Liner, Inc., J. C. Clayborn (15-ac) 2-I	3500	3692
McBride et al (was K. B. Oil Co.), J. M. Dickson (5-ac) 1	3000	3625
Phillips et al, Jas. R. Barcus (1-ac) 1	1600	3722
Magnolia Pet. Co., Marvin Andrews (39.6-ac) 2	12,000	3601
R. B. Walls (26-ac) 2	11,000	3641
Rajo Oil Corp., A. McComic-Shell (108-ac) 4	2500	3702

Red Star Oil Co., L. Smith
(1.51-ac) 1 .....9000 3573
Frank Russell Pet. Co., C. C. Crews-
Conoco (35-ac) 1 .....9600 3591½
E. Duncan (1.26-ac) 1, blk. 188..1500 3586
Sampson & Crane, T. H. Gill
(2-ac) 1 .....9600 3629
Selby O&G Co.-Lewis Prod. Co.,
M. T. Cole (80-ac) 5.....9200 3562
Shell Pet. Corp., N. Jobe (60-ac) 6..9000 3587
J. H. Spivey (88-ac) 7.....11,000 3755
Sinclair Prairie Oil Co., A. A. King
(337-ac) 18-B, Tract 1 .....8000 3460
A. A. King (147-ac) 8-B, Tract 5 10,000 3470
Stanolind O&G Co.-Simms Oil Co.,
E. L. Walker (60-ac) 3-B.....11,000 3555
Sun Oil Co., M. T. Cole
(264-ac) 12 .....10,500 3555
Calvin Brown (100-ac) 5 .....10,000 3640
The Texas Co., S. D. Walker
(213-ac) 5 .....2000 3587
Webb Pet. Co., M. R. Terrell
(21-ac) 1 3695
Welch & Sandler, R. W. Barnett-
Tidal (107-ac) 3 .....10,000 3736

LONGVIEW AREA—

Arkansas Fuel Oil Co., B. J. Adrian-
McCrary (60-ac) 6.....8500 3525
W. T. Burnside (209-ac) 5.....10,000 3502
W. T. Burnside (209-ac) 6.....11,000 3504
F. K. Lathrop (92½-ac) 5-C....13,000 3582
R. S. McKinley (106-ac) 5-A....8000 3635
S. G. Smith (80.56-ac) 3-B.....12,000 3559
C. L. Taylor (22-ac) 2 .....15,000 3566
Atlantic Oil Prod. Co., Ethel
Burnside (204-ac) 11-A.....14,000 3550
P. C. Castleberry (35-ac) 3.....9000 3624
McBee-Fisher (59-ac) 6.....9600 3505
J. C. Judge (520-ac) 18.....7500 3532
J. C. Judge (520-ac) 23.....10,500 3529
J. M. Moore (456-ac) 20.....9600 3536
Atlantic-Stanolind O&G Co.,
Fishburn 3 .....8400 3528
Atlantic-Sun Oil Co., M. Hays
(404-ac) 14 .....11,000 3558
California Pet. Corp. of Venezuela,
Stinchcomb (87-ac) 5 .....2500 3752
Deep Rock Oil Co. & Murphy,
H. Pritchard (105-ac) 7.....15,000 3552
E. L. Foshee et al, Fee 2, blk. 36.10,000 3686
Gibson Oil Corp., W. F. Smith
(50-ac) 3 .....9600 3700
Gulf Prod. Co., A. V. Bacle
(69-ac) 7 .....9000 3673
A. V. Bacle (69-ac) 8.....7500 3645
J. C. Judge (518-ac) 8.....9000 3528
Lacy-Snyder (75-ac) 8.....9000 3528
M. O. Sheppard (335-ac) 14....10,500 3513
M. O. Sheppard (335-ac) 15....11,000 3506
D. W. Henke & Guiberson Oil Co.,
C. L. Taylor (4-ac) 1 .....12,000 3527
Lucey Pet. Co., A. M. Kinsell
(47-ac) 3 .....8000 3660
Magnolia Pet. Co., H. L. Foster
(100-ac) 8 .....10,000 3576
A. J. Green (41.1-ac) 4.....9000 3591
Margay Oil Corp., J. Freeman
(28-ac) 3 .....15,000 3722
O. J. Perrin & A. L. Fell,
C. C. Landers-Shell 3 .....5000 3715
Red Star Oil Co., W. D. Anderson
(7½-ac) 4 .....13,000 3642
Selby O&G Co., A. Miller
(85-ac) 4 .....9000 3597
Snavely (361-ac) 10-B 9600 3575
Shell Pet. Corp., S. C. Fishburn
(100-ac) 4 .....10,000 3550
J. Moore (350-ac) 13.....11,000 3568
J. Moore (350-ac) 15.....10,000 3559
Sinclair Prairie Oil Co., J. W. Akin
(100-ac) 6-B 8500 3615
Stanolind O&G Co.-Simms Oil Co.,
Flewellen (374-ac) 15-B.....4000 3732
Sun Oil Co., J. M. Haynes
(202-ac) 8 .....10,000 3654
Allen Tooke (80-ac) 6-B 7500 3647
The Texas Co., T. W. Lee
(210-ac) 5 .....12,000 3562
Tidal Oil Co., J. J. Castleberry
(202-ac) 13 .....6000 3596
Arch Davis (130-ac) 9-B.....12,000 3559
Twin Oil Co., M. Bonner
(148-ac) 7 .....6000 3637
Yount-Lee Oil Co., M. B. Harley
(21-ac) 2 .....10,000 3597

East Texas Field Developments

Wildcat Drilling Report

(Wells shut down not included)

ANDERSON COUNTY—Jack W. Frazier et al's H. L. Hudson (198-ac) 1, M. Rionda sur, materials. W. H. "Bill" Roeser et al's M. A. Davey 1, P. G. Adams sur, dk.

BOWIE COUNTY—Joe M. Burnham-C. W. Robinson & John Greer's F. O. Weiss (949-ac) 1, J. Dean sur, elev 388 ft, anhydrite 2945-3030 ft, sd 3710 ft. Roy E. Anderson et al's A. Y. Breckenridge 1, M. Dykes sur, elev 352 ft, top Nacatosh sand 775 ft, trace dead oil 800 ft, dr 860 ft.

CASS COUNTY—Lapan-Lovejoy et al's S. A. Orr (320-ac) 1, G. W. Morris sur, no report.

CHEROKEE COUNTY — Bridges-Chandler et al's Berryman (300-ac) 1, H. Kimble-Dill sur, sd 1550 ft. W. N. Hamilton et al's Dr. P. E. Jones 1, J. D. Hamilton sur, materials. C. M. Joiner Pet. Corp. & Harris' W. W. Martin (275-ac) 1, Daniel Parker sur, elev 335 ft, Pecan chalk 2952-3280 ft, top Austin chalk 3746 ft, tested water 3809 ft. Wm. A. Stone et al's Mrs. J. I. Perkins (200-ac) 1, Thos. Stanford sur, sd 2700 ft. Wilson-Stubbs Oil Corp.'s M. F. Ragsdale (53-ac) 1, J. P. Wolfin sur, sd 3110 ft.

DELTA COUNTY—C. M. Joiner Pet. Corp. et al's J. A. Blackwell 1, H. Dunnetella sur, dr 2920 ft.

ELLIS COUNTY—Armstrong Bros. et al's J. T. Winn 1, E. Melton sur, sd 1435 ft. Carl Brooks et al's Anderson 1, E. C. Branch sur, sp and sd.

FRANKLIN COUNTY—Franco Oil Co. (J. F. Mills, L. S. Harper & A. P. McGee's) L. S. Harper (118-ac) 1, W. N. Dawson sur, elev 356 ft, top Pecan chalk 1320 ft, reaming to fsh for slip, td 3285 ft.

HENDERSON COUNTY—B. L. Green et al (was J. M. Rogers') M. H. Gossett (103-ac) 1, L. D. Stover sur, A-87, elev 341 ft, top Taylor lime 1450 ft, top Austin chalk 2347 ft, cap rock 2926-29 ft, Woodbine sand 2929-30 ft, sd for cas. H. H. Meyers et al's M. E. Olson (40-ac) 1, Geo. Wilson sur, sp and sd.

HOPKINS COUNTY—Harmony Oil Co. (J. F. Roark's) J. L. Taylor (88-ac) 1, John Polk sur, sd 540 ft.

KAUFMAN COUNTY—Stanley Darrill et al's S. Pannill (649-ac) 1, A. Cherino sur, sd 2360 ft.

LAMAR COUNTY — Doyle & Jondreau's Joe Horn (178-ac) 1, R. P. Mayo sur, sd 3030 ft; L. Martin (132-ac) 1, Joseph Deck sur, sd 2445 ft.

LEON COUNTY—John P. Schuffler's W. R. Thompson 1, N. M. Allen sur, dk. Leon County Oil Co. (Claude Kavanaugh's) John Morris (200-ac) 1-A, A. F. McWhorter sur, sd 2539 ft.

LIMESTONE COUNTY—C. M. Joiner Pet. Corp.-Miller Drlg. Co.'s W. Stephenson (54-ac) 1, Geo. Gentry sur, sd 1800 ft.

MORRIS COUNTY — Buchanan-Burkhalter et al's Staggers (65-ac) 1, Forbes & Nelson sur, elev 370 ft, hard Pecan chalk 2526-3020 ft, base broken Pecan 3095 ft, claim Austin chalk 3483-3506 ft, tested dry, co 3554 ft. Harris Drlg. Co.-C. M. Joiner Pet. Corp.'s C. D. Brown 1, lcn. W. L. Murrell-Geo. L. Pace et al's Walcott-Lott (577-ac) 1, D. A. Russell sur, abn.

RAINS COUNTY—Lone Star Synd. (was C. H. Balyess') J. S. Ownby (160-ac) 1, Alexander sur, elev 461 ft, top Midway 1130 ft, top Pecan chalk 1996 or 2043 ft, Austin chalk 3468-3800 ft, top Woodbine series between 4440-60 ft, top red beds 4705 ft, sd 4715 ft. Fred Harris et al's Markowitz (106-ac) 1, lcn.

RED RIVER COUNTY—L. G. Priest et al's G. W. Ware (1016-ac) 1, J. Burkham sur, elev 448 ft, dr 1900 ft.

SMITH COUNTY—McRobie et al's C. P. Hamilton (259½-ac) 1, J. Rector sur, dk.

RUSK COUNTY—T. E. Castle et al's R. H. Gary (50-ac) 1, J. Latham sur, (Trinity sand test), top Pecan chalk 2678 ft, sd 2810 ft. R. H. Lemon & A. F. Richardson's Luke Motley-Hall Wood (498-ac) 1, J. I. Sanchen sur, lcn. G. A. Hathaway et al (was Laster & Miller's) Gray 1, Jas. McClain sur, elev 315 ft, Pecan chalk 2180-2537 ft, top Austin chalk 2980 ft, claim show oil 3150-80 ft, co 3519 ft in Georgetown lime.

UPSHUR COUNTY—B. L. Watson (was Hill Kinsey) et al's D. J. Smith 1, J. R. Davis sur, dr 750 ft.

VAN ZANDT COUNTY—Daisy O&G Co.'s Mrs. C. A. Browning (100-ac) 1, J. P. Tackett sur, dr 2385 ft. C. M. Powell et al's W. E. Price (34¼-ac) 1, John Walling sur, lcn. A. C. Roan et al's W. E. Price (7-ac) 1, John Walling sur, lcn.

WOOD COUNTY—DeGenther & F. H. Zeigen et al's M. L. McClain (66-ac) 1, Sam Brooks sur, dr 1330 ft. W. B. Saulsbury et al's T. H. Peterson (320-ac) 1, W. B. McNutt sur A-418, dk. Talko Pet. Corp.'s C. S. Ross (86-ac) 1, F. L. Smith sur, elev 359 ft, top Pecan chalk 2892 ft, co to deepen, td 3500 ft. Wood County O&G Co.'s Guy Davis 1, John R. Clute sur, dr 2115 ft.

Many East Texas wells have already gone on the pump while it is expected that the next few months will find increasing activity in the installation of lifting equipment. The accompanying picture shows a Jensen Brothers Manufacturing Company's jack on an East Texas well.

NORTH and WEST TEXAS

Companies Retain Protection Acreage Near Deep Test; New Oil Pool Promised in Young County.

H. H. KING, *Staff Representative, Fort Worth, Texas*

Contract Let For 8000-Foot Test in Reagan County

San Angelo, Texas.—Contract has been made for the drilling of a test to the Ordovician lime horizon, or 8500 feet, in the Skelly-University pool, Reagan County, by Teo. W. Carter et al, who have assembled about 2000 acres of lease protection in the area. A tentative location has been made in the southeast quarter of Section 4, Block 7, University Land Survey, and on the same tract that the late Carl G. Cromwell and others spudded for a deep test one year ago. The death of Cromwell in an automobile accident resulted in the deep test project being called off. A number of companies have retained leases in the area although condemned for production in the regular lime in anticipation of a deep test, owing to the close proximity of the pool to the Big Lake field, which has scored 10 flowing wells in the Ordovician lime.

Ector County now leads all counties in West Texas in wildcat activity, having four active tests and location made for a fifth to be started promptly. C. C. Duffy-Walsh et al are the latest group to invade the county having made location for W. J. Rutledge 1, 330 feet from the east and 990 feet from the south lines of Section 7, Block B-15, P. S. L. Survey, or about three miles northwest of nearest production in the Connell field. Broderick & Calvert and associates are also to fulfill a 4500-foot contract in testing a block of about 3,900 acres, centering about 6½ miles north by east of the Connell field. Their J. E. Parker 1, located in northwest corner Section 15, Block 44, T&P Ry. Survey T-2-S, is drilling below 995 feet. L. C. Harrison et al's F. V. Addis 1, located in Section 35, Block 43, T-2-S, is drilling below 800 feet. D. D. Thomas, Green and York's W. P. Edwards 1, located in Section 38, Block 43, T-3-S, has developed a fishing job at 3160 feet. H. F. Wurtz et al's E. A. Ibbetson 1, which has been drilling at intervals for about two years, is milling on junk at 3616 feet. The latter is located in Section 16, Block 46, T-3-S, G. & M. M. B. & A. Survey.

Ward County continues to rank as the most active drilling center in the district, having 26 operations listed on current report. Most of these are drilling for oil production in the Grand Falls area, where flowing wells are developed from sandy-lime formation ranging from 2000 to 2500 feet in depth. Four new locations were reported last week for this area.

The addition of a new completion in the Ordovician lime horizon in the Big Lake field last week boosts the total deep wells to 10, with no dry holes. Big Lake Oil Company's University 6-C was drilled with rotary to 8836 feet, and flowed 1182 barrels of oil during the first 16 hours. The oil flow increased to 4218 barrels daily at the end of the first week, with gas production rated at 28,263,000 cubic feet daily, carrying 300 pounds back pressure on the casing and 285 pounds on the gas trap. The oil tests 55 gravity corrected. Big Lake Oil Company has two deep wells shut in, and will recondition both. Current production in the Big Lake field is being restricted to the 25,000 barrel daily maximum set by the Texas Railroad Commission as its proration quota, with the deep production accounting for 17,956 barrels of the total.

Production and Status of the 10 Deep Well Operations in the Big Lake Field for the 24-Hour Period Ending 7 a.m. August Third, Is Listed Below

Company—	Oil Production	Gas Production	Pounds Casing Back-Pressure	Pounds Tubing Back-Pressure	Corrected Gravity	Total Depth
Big Lake Oil Company—						
University 1-C	....	.....	(Shut in 7-31-32)	...	...	(*)8908
University 2-C	1,027	9,149,000	1425	875	55.9	8840
University 3-C	....	.....	(Shut in)	...	...	8926
University 4-C	1,939	11,464,000	1350	500	46.2	8833
University 5-C	1,941	18,383,000	1200	1200	56.2	8872
University 6-C	4,218	28,263,000	300	...	55.0	8836
Group One Oil Corporation—						
University 1-B	655	2,040,000	70	...	45.1	8671
University 2-B	2,895	14,065,000	1850	1500	48.2	8740
University 3-B	2,700	9,776,000	375	125	46.2	9020
University 4-B	2,581	14,150,000	1050	...	51.6	8560

(*) Plugged back to 8715 feet account water.

Young County Wildcats Open New Production

Wichita Falls, Texas.—Wildcat activity in Southern Young County yielded a commercial gasser and also promise of a new oil pool during the past week. The Texas Company's D. G. Killion 1, located near the center of a large block of leases situated about two miles southwest of Graham, filled 600 feet with oil during the first 18 hours after penetrating sand at 3485-3490 feet. Having promise of making a commercial producer, operations were halted at the above depth to cement 6⅝-inch pipe above the oil horizon. This wildcat is located near the center of the east extension of the D. R. Akin survey, abstract 2253, and considerable distance from production.

L. A. Long and associates completed a wildcat gasser in the southeast portion of Young County and south of the Herron City oil field when their A. W. Roark 1, NE NW Section 18, W. H. Kuykendall survey, abstract 1395, gauged 5,620,000 cubic feet of gas from sand at 2668-2674 feet. This gasser registers a closed-in rock pressure of 1160 pounds. Oil production is obtained from the same sand horizon as this gasser in several wells located about one mile to the northwest and north.

Two more 2200-foot or Canyon lime tests in Archer County failed to score production upon reaching their objective last week. Deep Oil Development Company's Crawford-Plowman 1, located in SWc Lot 16, H. Corzine survey, and about one mile southeast of the Chalk Hill pool, which has 11 producers in the Canyon, proved dry in sandy-lime at 2244-54 feet, and has shut down for orders. The above formations correlates with the producing horizon in the Chalk Hill pool. This apparent failure logged the Gunsight lime at 1410-12 feet with a surface elevation of 955 feet.

Continental Oil Company contributed its first failure to the growing list of wildcats to the Canyon series when C. L. Abercrombie 1-C, Section 23, Harris sub-division of the Club Ranch, plugged at 2501 feet. The latter logged Gunsight lime at 1424-26 feet,

with a surface elevation of 1058 feet, and top of the Canyon series at 2065 feet.

Clyde W. Carey et al have taken over Cavin & Minton's L. F. Wilson 1, located about 1½ miles south of the Chalk Hill pool, and will deepen from its present depth of 1906 feet to the Canyon lime horizon. This outpost reported Gunsight lime at 1360-65 feet, with a surface elevation of 957 feet.

Fort Worth, Texas. — Sulphur contaminated crudes in West Texas and New Mexico were hardest hit in the decreased oil purchases put into effect at the beginning of the August proration period. Two areas in West Texas were cut an aggregate of 4941 barrels in daily allowable, while the Hobbs field, New Mexico, was lowered from 29,500 to 25,000 barrels daily in order to balance the allowable with the nominated market outlet.

Properties in the Crane-Upton County area, West Texas, are restricted to approximately the marginal well allowance as result of purchasing companies having lowered their nominations from 16,700 to 13,259 barrels daily beginning August 1. The revised proration schedule credits the area with 599 wells, which will be allowed to produce an average of 22.14 barrels daily per well. Special production concessions for wells making large quantities of water are being terminated in this area, as a number of lease owners have recently installed pumps capable of lifting greater quantities of fluid than when pumped on the beam with a view of obtaining an allowance for water.

The Howard-Glasscock County district is also on a reduced market outlet that affords comparatively small allowances for potential production in excess of the marginal well allowance, which is fixed by law in the state, but not always fully observed. This area suffered a decrease of 1500 barrels in allowance, making the new quota 15,000 barrels daily for 521 wells since the July 1 schedule was issued.

The East Texas field retains its maximum allowance of 325,000 barrels daily, but steady growth in number of wells sharing in this restricted quota resulted in the well allowable being reduced from 46 to 44 barrels daily on August 1. The law governing marginal well allowable calls for 40 barrels daily on wells producing from a depth of more than 3300 feet, and all wells in this field fall within the 40-barrel classification.

Proration Data on Texas-New Mexico Fields As Of August 1, 1932

	No. wells	Official daily pot'l. production	Maximum daily prod. allowance	Daily average yield per well
West Texas—				
Yates	400	4,642,134	65,000	162.50
Winkler County	485	90,574	35,000	72.16
Howard-Glasscock District—				
2000-2500-foot wells	91	48,256	7,194	79.05
3000-foot wells	89	11,330	3,078	34.58
2500-foot wells	48	6,886	1,596	33.25
1300-1800-foot wells	293	6,479	3,132	10.69
Total	521	72,951	15,000	28.79
Crane-Upton	599	55,597	13,259	22.14
Ector County	77	25,385	4,073	52.94
District total	2,082	4,886,641	132,332	63.56
Texas Panhandle—				
Gray County	765	75,008	32,740	42.79
Hutchinson County	740	21,426	13,442	18.16
Carson County	241	12,301	5,544	23.00
Moore County	21	1,976	836	39.81
Wheeler County	41	548	438	10.68
District total	1,808	111,259	53,000	29.31
Central East Texas—				
East Texas Field	7,096	.....	.....(1)	44.00
Van	332	.....	50,000(2)	150.60
Southwest Texas—				
Darst Creek	270	138,830	18,000	66.66
Salt Flat	263	10,335	10,000	38.02
Miscellaneous—				
North Texas District	14,937	74,831	57,001	3.82
West Central Texas District	8,312	44,516	30,000	3.61
Jones-Fisher Counties	123	9,315	2,000	16.26
New Mexico—				
Hobbs	159	1,005,658	25,000	157.23
Eunice	8	.....	.....	50.00

[1]Equal quota per well used since 9-5-31, with approximate 325,000 barrels daily maximum.
[2]Well allowable determined by oil sand thickness since 10-16-31.

North Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
R. J. Brown et al, Plemmons 1	10	729
Plemmons 2	150	706
Plemmons 3	180	710
Continental Oil Co., C. L. Abercrombie 1-C	*	2501
Fain-McGaha Oil Corp., Fee 5-C	30	1791
C. E. Lutz et al, Logan 1	10	1229
Petroleum Producers Co., Archer County (Andrews) 1	*	1516
Geo. Proctor et al, Tarr 1	*	1450
Texas Plains Oil Co., W. H. Terrell 2-C	400	665
COOKE COUNTY—		
E. J. Ruwalt et al, Ed. Sark 1	*	1581
WICHITA COUNTY—		
R. R. Clark et al, Bickley 24	150	867
N. H. Martin et al, Bolding 2	*	1747
Geo. Proctor et al, Honaker 8	*	1030
WILBARGER COUNTY—		
Davis Oil Co., McCrary 1	*	2710
The Texas Co., W. T. Waggoner 402	10	1082
YOUNG COUNTY—		
W. R. Cooper et al, Dunagan 5, Sec. 163	75	941
Dunagan 6, Sec. 163	35	939
Dunagan 7, Sec. 163	50	937
N. D. Goldsmith et al, Dunagan 2, Sec. 163	35	940
A. J. Pepper et al, Brown 1, Sec. 258	*	636
W. M. Scott et al, Keith 7, Sec. 268	15	668
R. J. Watson et al, Larimore 1, Sec. 253	*	725
D. L. Wolfe et al, Skiles 1, Sec. 244	*	736
ARCHER COUNTY—		
Falls Refining Co., L. F. Wilson 1	25	2222
R. N. Hamilton et al, Browning 5	*	470
T. M. Hellorms et al, Perkins-Cullum 2	7	648
E. B. Madden et al, J. T. Richardson 19	8	1313
White-Duncan et al, S. Webb 4	300	696
S. Webb 5	160	705
JACK COUNTY—		
A. H. & S. P. Schmitt et al, Lewis 1	*	1105
WICHITA COUNTY—		
W. D. Cline et al, J. M. Brooks 2	*	332
A. Cohen et al, J. E. Roller 6	10	1251
C. R. Cox et al, Dutton 1	*	1205
R. R Clark et al, Bickley 25	75	867
WILBARGER COUNTY—		
John O'Neil et al, R. L. Castleberry 2	15	1521
YOUNG COUNTY—		
Alexander et al, T. L. Oliver 1, Sec. 1940	*	578
Cable Oil Co., Snider 25	15	594
Christie et al, Norred 1	¶1½-15	3895
L. F. Kubecka et al, Culbers 2	*	600
L. A. Long et al, A. W. Roark 1, Sec. 18	¶5½	2674
R. D. McKinney et al, Barnett 1	10	668

WEST TEXAS

Completions

FISHER COUNTY—		
The Texas Co., J. T. Johnson 1	*	3238
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Kirby 12-E	75	466
REAGAN COUNTY—		
Big Lake Oil Co., University 6-C	¶37¾-3500	8836
WARD COUNTY—		
J. V. Massie et al, Mrs. C. Stewart 1	40	2468
Pat Moran & Burkhart, J. T. Sweatt 2	35	2244

Look for Increased Yield At Rabb Ridge Oil Field

Houston.—Completion this week of four producers at Rabb Ridge, Fort Bend County, with an aggregate initial production of 3950 barrels probably will result in a substantial increase in production above the 14,900-barrel figure maintained as a daily average during the past week.

In addition, enough work is going on and planned in the area to assure considerable activity there for two months at least. There are six active operations, not including projected locations.

According to an order issued by the Texas Railroad Commission August 4, only one well may be drilled to 20 acres at Rabb Ridge.

Austin, Texas.—An effort will be made in Houston August 16 at a hearing of the Texas Railroad Commission to prorate Rabb Ridge field, Fort Bend County, on an acreage basis, according to an announcement following on the heels of an order of the commission issued August 4 whereby not more than one well must be drilled to each 20 acres in the field and whereby wells must be placed at least 466 feet from lease lines and 933 feet apart.

A statement issued August 5 by Chief Supervisor R. D. Parker showed West Texas to be the only area in the state producing more per well during the week ending July 23 than East Texas. The commissioner's statement embraced the following figures:

Field	Number of Wells	Daily Average Production	Production Per Well
Panhandle	1,900	51,930	27.33
North and West Central	23,300	74,100	3.18
West Texas . . .	2,880	173,980	60.41
*East Central Texas	1,450	57,000	39.31
East Texas	7,100	338,000	47.73
Southwest Texas	3,580	55,875	15.61
Gulf Coast	2.500	118,100	47.24
State Total . .	42,910	869,805	20.27

*Includes Van field.

Sinclair Prairie Pipe Line Offices Consolidated

Fort Worth, Texas.—All activities of the Sinclair Prairie Pipe Line Company in Texas will be conducted from a district office established early last week here on the fifth floor of the Sinclair building, with A. D. Sloan, general superintendent in charge. Offices have been maintained heretofore at Dallas, Eastland, Tyler and Houston. Tom R. Lott, former superintendent for Prairie Pipe Line Company, Eastland, is assistant general superintendent, and now located at Fort Worth. Chas. Fitzgerald, former superintendent for Pure Oil Pipe Line Company of Texas, which was a subsidiary of Prairie Pipe Line Company with headquarters at Dallas, is stationed at Fort Worth in the capacity of assistant to the president.

Permits for Texas Wells

New Operations

ARCHER COUNTY — Fain-McGaha Oil Corp., Wichita Falls, Fee, C, 81, 5, B 2, DCSL No. 3 sur, 450 ft from n and 150 ft from e line. Geo. Proctor, Wichita Falls, L. H. Tarr, 237, 1, B 136, J. W. Harris sur, 450 ft from s and e lines. White, Duncan, Holt & Tedford, Wichita Falls, S. Webb, 40, 6, B 1, I&GN sur, 150 ft from n and 450 ft from e line; 7, 450 ft from e and 1050 ft from s line. Consolidated Oil Co., Wichita Falls, E. Colgan, 102, 1, B 43, L. M. Meade sur, 150 ft from e and 750 ft from s line. C. C. Williams, Jean, J. S. Matlock, 65, 1, J. Saunders sur, 150 ft from n and e lines. Shappell Oil Co., Wichita Falls, H. Wilmut, 360, 2, B 6, G. N. Smith sur, 1050 ft from n and 750 ft from e line. Regal Oil Co., Wichita Falls, Gulf, 10, 1, L 42, B 9, DCSL No. 3 sur, 150 ft from n and w lines. S. H. Huggins, Wichita Falls, J. R. Parkey, 80, 1, B 2, S. P. Ry. sur, 750 ft from n and e lines. Burns & Long, Wichita Falls, D. Haralson, 80, 1, B 19, W. E. Probert sur, 150 ft from n and w lines. Deep Oil Dev. Co., Wichita Falls, L. W. McCrory, 47, 1, B 75, Amer.-Trib. sur, 330 ft from n and 455 ft from e line. L. W. McCrory, 40, 1, B 75, L 4, Amer. Trib. sur, 330 ft from n and 455 ft from w line. F. Jehlik, 51, 1, B 131, Club Ranch sur, 150 ft from n and e lines se¼. Fain-McGaha Oil Corp., Wichita Falls, J. W. Campbell, 30, 2, B 26, DCSL No. 4 sur, 1382 ft from w and 150 ft from s line. Texas Plains Oil Co., Wichita Falls, W. H. Terrell, C, 120, 2, B 17, W. L. Herring sur, 450 ft from e and 150 ft from s line. R. N. Hamilton, Wichita Falls, P. Browning, 10, 1, B 5, GE&L sur, 150 ft from e and 220 ft from s line. Whitehill Oil Corp., Tulsa, Okla., H. S. Morrison, 80, 20, B 4, DCSL sur, 532 ft from e and 500 ft from s line. Underwood Dr. Co., Wichita Falls, H. L. Ward, 250, 2, 1382, TE&L sur, 900 ft w of No. 1. D. S. Montfort, Dallas, M. R. Taylor, 60, 2, S 19, W. L. Herring sur, 900 ft from e and 1090 ft from s line.

BASTROP COUNTY — Marts & Beaven, Dallas, A. Neidig, 75, 1, J. Burleson sur, 150 ft from e and 525 ft from n line.

BEE COUNTY—Texas Co., Houston, D. W. Cox, 80, 1, J. M. Uranga sur, 250 ft from e and 610 ft from s line sw¼. E. Gremmel, 353, 6, Jno. Pace sur, 300 ft n of No. 5.

BRAZORIA COUNTY — Tri-Fin Oil Co., Houston, R. H. Moers, 926, 1, F. Moore sur, 693 ft from n and 1635 ft from e line.

BROWN COUNTY—J. B. Neiswanger, Osborne, Kansas, G. Ethridge, 314, 7, K.C.S.L. sur, 315 ft from e and 575 ft from s line. J. P. Nystel, Abernathy, C. T. Moore, 57, 1, K.C.S.L. Charter Oil Co., Brownwood, O. H. Nichols, 60, 6, M. M. Flores sur, 350 ft e of No. 5. S. O. Looper, Grosvenor, Fee, 153, 1, S 4, J. O. Gilliams sur, 450 ft from w and 800 ft from s line.

CALLAHAN COUNTY—W. A. Thompson, Baird, Bell Est., 160, 1, S 77, Bayland Asy. sur, 750 ft from e and 150 ft from s line sw¼. Fred Read, Tulsa, Okla., Jno. Taylor, 40, 2, B 67, Bayland Asy. sur, 1100 ft from s and e line. Ungren & Frazier et al, Abilene, I. N. Jackson, 90, 2, S 21, E. T. Ry. sur, 200 ft from w and 600 ft from s line. Sample & Wylie, Baird, E. L. Finley, 80, 1, S 11, Bayland Asy. sur 450 ft from n and e lines.

CHAMBERS COUNTY — Texas-Gulf Prod. Co., Houston, Kirby, A, 73, 11, H. Griffith sur, 1090 ft from w and 225 ft from s line. Yount-Lee Oil Co., Beaumont, Z. Fisher, 10, 4, Wm. Bloodgood sur, 295 ft from n and 300 ft from w line. Texas Gulf Prod. Co., Houston, Kirby, C, 15, 3, H. Griffith sur, 563 ft from w and 50 ft from s line.

CHEROKEE COUNTY — Merry Bros. & Perini, Tyler, A. Kelly, 90, 2, M. S. Coy sur, 330 ft from n and w lines. W. F. Russell, Gainesville, E. P. Dills, 53, 1, W. B. F. Skinner sur, 300 ft from w and 150 ft from s line (Cooke County). R. Y. Walker, Dallas, A. Kelly, 21, 1, M. S. Coy sur, 330 ft from n and w line of blk. 12. A. Kelly, 21, 1, M. S. Coy sur, 330 ft from n and w lines of blk. 4.

COOKE COUNTY — W. F. Russell, Gainsville, E. P. Dills, 53, 1, W. B. F. Skinner sur, 300 ft from w and 150 ft from s line.

COLEMAN COUNTY — Brown & Ekholm, Coleman, S. C. Edmondson, 28, 1, 270, E. N. Eubanks sur, 150 ft from s and w lines. Arcadia Refg. Co., Coleman, Wm. Burkett, 13, 2B, 165, E. M. Justice sur, 330 ft w of 1B. Wm. Burkett, A, 84, 3, 166, D. J. Holt sur, 245 ft from e and 157 ft from n line.

COMANCHE COUNTY — Sipe Springs Oil Co., Sipe Springs, E. H. Rauhut, 44, 9, S 2, B 4, BS&F sur, 300 ft from w and 734 ft from s line.

DUVAL COUNTY — Corrected location — Whisenant, Trenchard & French Oil Corp., Laredo, C. W. Hahl, 30, 1, S 44, 770 ft from e and 230 ft from s line sw¼ sw¼. Corrected location — Texas Co., Houston, Duval Ranch, 2A, S 574, 150 ft from w and 573 ft from s line. Thomas & Tarver, Inc., San Antonio, Duval Ranch, 40, 1, S 576, 200 ft from s and e lines. Humble Oil & Refg. Co., Houston, P. E. White, 640, 6, S 58, 1650 ft from w and 2970 ft from s line of sec. Buchanan & Terrell, San Antonio, J. T. Smith, 40, 1, S 46, 330 ft from n and w lines of nw¼ of ne¼.

EASTLAND COUNTY—G. H. Wilkins et al, Eastland, M. E. Holcomb, 65, 1, Jn. House sur, 200 ft from n and e lines. Arab Gasoline Corp., Eastland, I. N. Hart, 457, 1, S 57, B 4, H&TC sur, 660 ft from n and e lines of s½.

ELLIS COUNTY — Paris Oil Co., Dallas, O. S. Bain, 60, 1, R. M. Williamson sur, 1500 ft from s and 300 ft from w line.

FALLS COUNTY—Bell & Manton, Waco, H. Lessman, 112, 1, L 4, B 14, G. Basquez sur, 330 ft from e and 1850 ft from s line.

FORT BEND COUNTY — Gulf Prod. Co., Houston, F. I. Booth, A, 1107, 3, S. Kennedy sur, 100 ft s of center of n line. Texas Co., Houston, Wolters, 100, 2, S. Kennedy sur, 150 ft from s and e lines. Humble Oil & Refg. Co., Houston, H. P. Lockwood, 383, 5, Jno. Rabb sur, 300 ft from n and 1000 ft from w line. Lockwood-Sharp, A, 469, 8, Jno. Rabb sur, 1000 ft from e and 300 ft from n line. A. P. George, B, 419, 2, Jno. Rabb sur, 1000 ft from w and 340 ft from n line.

FREESTONE COUNTY—Creighton & Co., Dallas, W. A. Holley, 80, 1, AB&M 1, sur, 150 ft w of center of e line.

GREGG COUNTY—Jack T. Life, Athens, B. Moore, 2, 1, D. Moore sur, 87 ft from e and 188 ft from s line. Marine Prod. Corp., Longview, G. W. Richey, 3, 1, Wm. Carleton sur, 150 ft s of center of n line. Selby Oil & Gas Co., Tulsa, Okla., Snavely, C, 118, 6, J. R. Crosby sur, 330 ft from n and w lines. Simms Oil Co., Dallas, A. J. Tuttle, 95, 6, W. H. Castleberry sur, 330 ft from n and w lines. H. R. Smith, Inc., Luling, R. Gray, 31, 3, D. Dainwood sur, 1725 ft from s and 190 ft from e line. Bridwell Oil Co., Wichita Falls, O. Lockett, 27, 3, D. Ferguson sur, 370 ft s of center of n line. Koberg Oil Co., Oklahoma City, Okla., L. Martin, 25, 3, T. Johnson sur, 330 ft s of center of n line. Rhoads Drilling Co., Fort Worth, Sabine River Tr. 4, 63, 3, E. L. Walker sur, n of Texas Co. Cole 5; 4, n of Texas Co. Cole 7. Sabine River Tr. 3, 84, 3, T. Johnson sur, w of Gulf-Judge 10. L. C. Collins et al, Tyler, C. Fisher, 133, 1, J. Ruddle sur, 330 ft from s and w lines. Albert Plummer, Houston, Beall, 79, 4, Wm. Chisum sur, 330 ft from n and w lines. M. J. Munn, Longview, I&GN, 19, 7, M. Van Winkle sur, sw corner. F. A. Bates, Shreveport, La., M. T. Cole, 40, 3, E. M. Bramlette sur, 330 ft from n and w lines. Russell Pet. Corp., Kilgore, C. C. Crews, 43, 2, L. Perkins sur, 330 ft from s and e lines. Rice Drilling Co., Shreveport, La., Hughey-Ross, 10, 2, Jno. Moffitt sur, 330 ft n of center of s line. Selby Oil & Gas Co., Tulsa, Okla., M. T. Cole, 80, 7, J. M. Meador sur, 788 ft from n and 330 ft from e line. Darby Pet. Corp., Tulsa, Okla., W. H. Richey, 43, 5, H.

H. Edwards sur, 330 ft from n and 250 ft from e line. J. C. Farmer, Kilgore, A. O. Godfrey, 26, 3, M. Van Winkle sur, center. Arkansas Fuel Oil Co., Shreveport, La., Hughey-Ross, 220, 10, Jno. Moffitt sur, 450 ft from n and 211 ft from e line. W. T. Burnside, 209, 10, F. W. Johnson sur, 660 ft s of 9; 9, 660 ft s of 8. G. Donaldson, 40, 4, L. B. Outlaw sur, 330 ft from s and w lines. Calvin, V, 65, 6, H. Hathaway sur, 601 ft n of 1. E. M. Whatley, 44, 2, Wm. Robinson sur, 330 ft from w and 990 ft from s line. E. K. Lathrop, B, 58, 4, Wm. Robinson sur, 830 ft s of 3. W. T. Burnside, 209, 7, F. W. Johnson sur, 660 ft s of 6; 8, 660 ft s of 7. Gulf Prod. Co., Houston, A. Nichols, 52, 3, D. Dainwood sur, 574 ft from e and 555 ft from s line. G. W. Longley, 20, D. Dainwood sur, 330 ft n of center of s line. M. O. Shepperd, 335, 18, G. R. Rains sur, 288 ft from n and 330 ft from e line. Shell Pet. Corp., Dallas, W. T. Burnside, 160, 9, F. W. Johnson sur, 990 ft from n and 330 ft from w line; 10, 1980 ft s of 9. G. W. Richey, 176, 10, L. Rigsby sur, 330 ft from w and 500 ft from s line. J. S. Elder, A, 50, 3, M. Van Winkle sur, 410 ft s of 2. S. C. Fishburn, 100, 5, F. W. Johnson sur, 2193 ft from n and 330 ft from e line; 6, 1198 ft from n and 236 ft from e line. Atlantic Oil Prod. Co., Dallas, J. J. Fuller, 49, 5, Irwin sur, 788 ft from e and 308 ft from s line. Yount-Lee Oil Co., Beaumont, Mrs. P. Hopkins, 100, 7, W. H. Castleberry sur, 940 ft se of 1. T. W. Lee, B, 35, 1, Wm. Robinson sur, 330 ft from n and w lines; 2, 330 ft from s and w lines. J. D. Davis, A, 80, 6, Wm. Robinson sur, 330 ft from n and 780 ft from e line. B. E. Rodden, 80, 5, Wm. Robinson sur, 255 ft from n and 680 ft from e line. Mrs. V. Calvin, 62, 5, H. Hathaway sur, 330 ft from w and 128 ft from s line; 6, 330 ft from n and w lines. Tidal Oil Co., Kilgore, A. Davis, 130, 10, W. G. Painter sur, 700 ft ne of 7. E. L. Smith Oil Co., Mexia, C. L. Taylor, B, 25, 3, W. H. Castleberry sur, 235 ft s of center of n line; 4, e of 3. Sinclair Prairie Oil Co., Fort Worth, J. W. Aking, 100, 7, W. H. Castleberry sur, 330 ft from s and 1048 ft from e line. M. Moncrief, 307, 22, W. H. Castleberry sur, 330 ft from w and 1309 ft from s line. J. R. Williams, 82, 7, W. L. Wilburn, 330 ft from n and e lines. A. A. King, B, 147, 10, Jno. Keiser sur, 330 ft from e and 1165 ft from s line; 9, 960 ft from w and 2718 ft from s line. I. Isley, 100, 8, G. R. Rains sur, 330 ft from w and 1778 ft from s line. Sun Oil Co., Dallas, T. G. Pressley, 49, 1, M. Alexander sur, 330 ft from n and w lines. Magnolia Pet. Co., Dallas, R. H. Rowland, 12½, 3, M. Van Winkle sur, 150 ft from n and 100 ft from e line.

GRAY COUNTY — Sun Oil Co., Dallas, Combs-Worley, 160, 3, S 35, B 3, I&GN sur, 660 ft from n and e lines.

GRAYSON COUNTY — J. R. T. Barton, Denison, H. C. Chiles, 106, 1, A. Morrison sur, 200 ft from n and 565 ft from e line.

GALVESTON COUNTY — Yount-Lee Oil Co., Beaumont, Cade, 460, 30, N. Fitzsimmons sur, 898 ft from n and 390 ft from e line; 31, 2395 ft from n and 1160 ft from e line.

HARDIN COUNTY — Paraffine Oil Co., Houston, Fee, 12, 94, F. H. Green sur, 37 ft from n and 113 ft from w line. Prudential Oil Co., Beaumont, M. Stewart, 50, 1, S. Jackson sur, 150 ft from w and 750 ft from s line. B. G. Dowell, Batson, S. R. Buchanan, 4½, 100, Milholme sur, 240 ft from e and 25 ft from s line of blk. 7.

HARRIS COUNTY — Bayou Prod. Corp., Galveston, C. W. Hahl, 3000, 1, Wm. Hedge sur, 350 ft from n and 970 ft from e line. Sun Oil Co., Beaumont, R. L. Blaffer, 292, 59, R. Dunman sur, 74 ft from e and 1441 ft from s line. La Pep Oil Co., Pelly, Jones, 1, H. Whiting sur, 76 ft from e and 186 ft from s line.

JACK COUNTY—L. J. Jeffs, Graham, J. M. Box, 24, 1, S 1, S. P. Ry. sur, 150 ft from n and e lines.

JASPER COUNTY — Rio Neches Oil Co., Oklahoma City, Okla., Boykin, 160, 5A, M. Rackie sur, sw of 1A.

JEFFERSON COUNTY — Barney Thames, Houston, Caaison, 5, 2, B 1, J. Douthitt sur, 15 ft from n and 350 ft from w line.

LIBERTY COUNTY — Republic Prod Co., Houston, Delbear, 800, 146, J. Devore sur, between 91 and 86. D. & L. Prod. Co., Houston, Layton, 3, 3, J. Devore sur, 84 ft from s and 67 ft from w line.

MONTGOMERY COUNTY—Humble Oil & Refg. Co., Houston, South Texas Dev. 320, 4, T. C. Howell sur, 1900 ft from s and 466 ft from e line of sur.

NUECES COUNTY — Houston Oil Co., Houston, T. M. Howell, A, 333, 2, H. B. Sheppard sur, 1125 ft from n and 175 ft from w line.

PALO PINTO COUNTY—Brazos River Gas Co., Mineral Wells, L. E. Slay, 206, 3, R. Clark sur, 680 ft se of 1.

PECOS COUNTY—Dittman Oil Co., Fort Stockton, D. G. Gregg, 80, 1, S 101, B 10, H&GN sur, 330 ft from e and 1650 ft from s line. W. G. Davis, Iraan, F. Bowers, 80, 1, S 39, B 16, Univ. sur, 330 ft from s and e lines. Steed Prod. Co., Dallas, W. H. Monroe, 40, 1, S 39, B 19, H&TC sur, 150 ft from w and 300 ft from s line; 2, 150 ft from w and 450 ft from s line. Tippett, 120, 4, S 40, 300 ft from w and 450 ft from s line; 5, 150 ft from s and 450 ft from w line.

RUSK COUNTY—Acme Oil Co., Longview, L. Givens, 3, 2, R. W. Smith sur, 150 ft from w and 100 ft from s line. Aston Oil Co., Overton, J. R. Alford, 47, 6, B 39, T. J. Moore sur, 152 ft s of center of n line. I. P. O'Neil, Tyler, W. O. Alford, 120, 1A, H. B. Dance sur, 660 ft w of 1. S. K. Vierson, Okmulgee, Okla., A. Givens, 12, 2, R. W. Smith sur, nw corner. I. P. O'Neil, Tyler, W. O. Alford, 120, 2A, H. B. Dance sur, 660 ft w of 2. Manahan Oil Co., Fort Worth, N. Bean, 25, 4, I. Ruddle sur, 330 ft from s and w lines. American Liberty Oil Co., Dallas, C. Young, C, 63, 4, M. J. Pru sur, 224 ft from e and 330 ft from s line. C. Young, B, 10, 2, M. J. Pru sur, 261 ft from w and 320 ft from s line. Gulf Prod. Co., Houston, J. W. Shaw, 89, 4, F. Cordova sur, 1776 ft from e and 164 ft from n line; 5, 450 ft from w and 164 ft from n line. A. H. Rayford, 59, 4, F. Cordova sur, 330 ft from n and 1842 ft from e line; 5, 330 ft from n and 1618 ft from w line. R. M. Griffin, 65, 9, I. Ruddle sur, 338 ft s of 2. A. M. Griffin, 65, 9, I. Ruddle sur, 338 ft s of 2. A. H. Rayflrod, A, 29, 4, F. Cordova sur, 1701 ft from e and 164 ft from s line; 5, 675 ft from w and 164 ft from s line. L. P. Thrash, 89, 6. F. Cordova sur, 330 ft from n and w lines. Humble Oil & Refg. Co., Houston, T. Barton, 50, 3, T. Grace sur, 330 ft from s and w lines. J. E. Arnold, 43, 3, T. H. Smith sur, 497 ft from e and 512 ft from s line. W. B. Kee, 76, 6, Jno. Womack sur, 626 ft from n and 460 ft from w line. R. E. L. Silvey, B, 209, 10, T. J. Martin sur, 1205 ft from e and 330 ft from s line. H. White, B, 134, 3, J. M. Scott sur, 330 ft from n and e lines. W. L. Price, 446, 21, J. M. Scott sur, 1230 ft from s and 1100 ft from e line. Sinclair Prairie Oil Co., Fort Worth, W. D. Kinney, 579, 36, J. B. Cadena sur, 330 ft from w and 740 ft from s line, blk. 32. W. D. Kinney, 35, 330 ft from e and 725 ft from s line, blk. 31. Texas Co., Shreveport, La., A. W. Kersh, 211, 4, E. B. Foulks sur, 1042 ft from n and 330 ft from e line. Tidal Oil Co., Kilgore, J. M. Finney, 40, 5, J. Ximinez sur, 185 ft from w and 810 ft from s line. Mid-Kansas Oil & Gas Co., Shreveport, La., G. W. Moore, 92, 4, W. J. Roan sur, 779 ft e of 3. D. Ledbetter, 212, 9, W. J. Roan sur, 1888 ft from e and 370 ft from s line; 10, 1944 ft from e and 375 ft from s line. Sun Oil Co., Dallas, R. J. Hendon, 120, 2, J. Ximinez sur, 330 ft from n and w lines. H. L. Hunt, Tyler, R. W. Fair, 55, D3, Collins sur, 1745 ft from n and 330 ft from w line. R. W. Fair, 211, C8, M. J. Pru sur, 500 ft from w and 1529 ft from s line. D. M. Bradford, 226, D2, J. Ximinez sur, 330 ft from n and w lines.

SMITH COUNTY—J. A. Gladish, Denton, A. Green, 4, 1, D. W. Campbell sur, center. K. O. T. Oil Co., Ardmore, Okla., S. S. Cook, 46, 4, B 2, J. Vargas sur, 330 ft from n and e lines. S. S. Cook, 10, 2, J. Vargas sur, 330 ft s of center of n line. Rocky Mountain Oil Co., Longview, S. S. Cook, 10, 2, J. Vargas sur, 400 ft s of center of n line. Sinclair Prairie Oil Co., Fort Worth, A. S. Jarvis, A, 266, 19, J. Vargas sur, 1388 ft from s and 2043 ft from e line.

SHACKLEFORD COUNTY—L. A. Warren et al, Cisco, L. Smith, 40, 1, S 18, B 11, T&P sur, 150 ft from n and e lines. Hart & Gist, Albany, Clarke-Biggs, 40, 7, S 2, Blind Asy. sur, 450 ft from w and 750 ft from s line. Grisham-Hunter Corp., Abilene, D. Ward, 80, 3, S 3, Bayland Asy. sur, 150 ft from w and 925 ft from s line se¼.

STARR COUNTY — Mathew & Chitty, La Feria, R. E. Monroe, 40, 1, Sh/3B, Por. 70, 400 ft from e and 280 ft from s line. W. E. Hopper, Mission, Kelsey-Bass, 10, 3, Sec 6, 150 ft from e and 365 ft from s line. Karona Oil Co., Corpus Christi, F. Doyno, 34, 2, Sh. 77a, Por. 81, 750 ft from e and 469 ft from s line blk. 8.

TAYLOR COUNTY—G. H. Johnson, Sweetwater, J. C. Huddleston, 144, 1, S 39, B 18, T&P sur, 154 ft from s and w lines.

THROCKMORTON COUNTY—J. A. Bearman et al, Cisco, Ledbetter, 160, 6B, S 2, S.P. Ry. sur, 300 ft from n and 150 ft from e line.

UPSHUR COUNTY—Scott & Ashford, Gilmer, H. Doughfrate, 128, 1, M. P. D. Torres sur, 772 ft from n and 1755 ft from w line. R. A. Johnston, Tyler, J. S. Loftin, 16, 1, McKinney-Williams sur, 254 ft from n and 330 ft from e line. C. L. Mackey, Gladewater, L. T. Mackey, 92, 1, S. Harrell sur, 230 ft from e and 330 ft from s line; 2, 660 ft ne of 1; 3, 660 ft ne of 2. Feazel Davenport Corp., Dallas, W. M. Phillips, 71, 7, H. H. Edwards sur, 312 ft from n and 330 ft from w line. Simms Oil Co., Dallas, W. R. Nicholson, 800, 11, M. Mann sur, 1664 ft from n and 330 ft from e line. Humble Oil & Refg. Co., Houston, E. O'Byrne, B, 105, 4, D. Ferguson sur, 378 ft from n and 330 ft from e line. Magnolia Pet. Co., Dallas, J. W. Free, 169, 17, G. W. Hooper sur, 181 ft from n and 330 ft from w line. California Pet. Co., Shreveport, La., W. M. Clements, 58, 6, M. Mann sur, 395 ft from n and 882 ft from e line.

VAN ZANDT COUNTY — B. E. Gamble, Dallas, I. D. Walker, 1, 1, J. Walling sur, center of blk. 34. Pure Oil Co., Fort Worth, L. V. Freeman, 31, 3, J. Walling sur, 250 ft from s and w lines. A. W. Ellison, 40, 1, J. Walling sur, 150 ft from n and w lines.

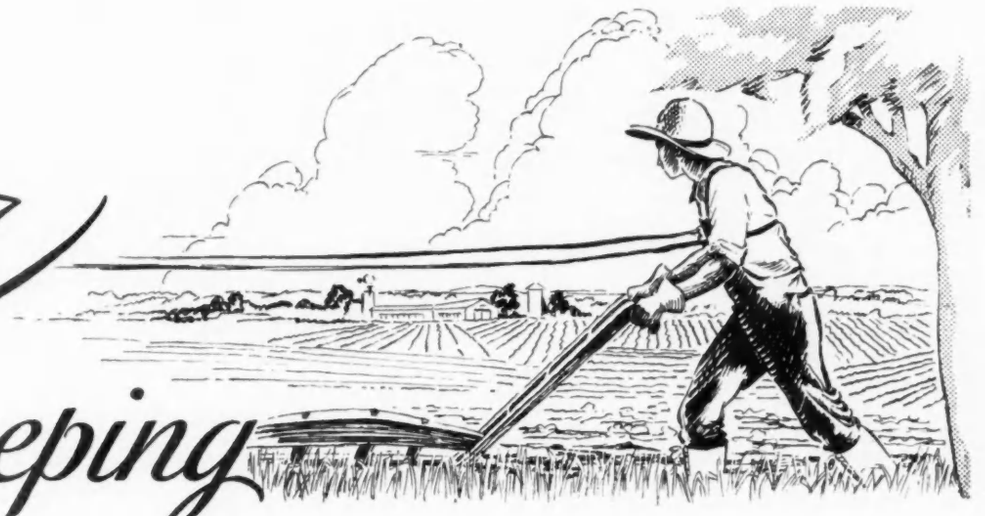
WICHITA COUNTY—M. E. Grady, Electra, Fee, 32, 7, B 16, Ward & Todd sur, 450 ft from n and 300 ft from e line. Mogren & Anderson, Electra, E. E. Goetze, 151, 29, SA&MG sur, 750 ft from n and 350 ft from w line. J. C. Clower, Wichita Falls, G. L. Dobie, 107, 16, 2, DL&C sur, 1601 ft from e and 1145 ft from s line.

WILBARGER COUNTY—Davis Oil Corp., Vernon, L. Webb, 100, 1, S 8, B 5, H&TC sur, 150 ft from s and w lines.

WARD COUNTY—J. C. Maxwell, Fort Worth, E. Brillhart, 80, 1, S 15, B 34, H&TC sur, 330 ft from n and w lines n½ se¼.

YOUNG COUNTY — Riner & Omohundro, Wichita Falls, E. C. Keith, 20, A7, 268, TE&L sur, 150 ft from n and 750 ft from e line. N. D. Goldsmith et al, Olney, J. P. Dunagan, 32, 3, 163, TE&L sur, 150 ft from e and 450 ft from s line; 4, 150 ft from s and e lines; 2, 150 ft from e and 450 ft from n line. S. D. Glover, Vernon, C. W. Johnston, 40, 11, B 11, E. W. Sargent sur, 450 ft from w and 150 ft from s line. Henry Craig et al, Olney, R. J. McCloud, 30, 2, 1395, TE&L sur, 450 ft from n and 150 ft from e line. Holbrook & Woods, Wichita Falls, F. M. Cullers, 80, 10, S 19, Y.C.S.L. sur, 300 ft s of 3. Seitz, Comegys & Seitz, Wichita Falls, J. W. Bullock, 40, 1, 61, TE&L sur, 783 ft from n and w lines. L. D. McKinney, Newcastle, Barnett-Gibbs, 30, 1, 2245, TE&L sur, 450 ft from s and 150 ft from e line. N. B. Crenshaw, Graham, E. C. Turner, 40, 1, C. E. Upham sur, 330 ft from w and 990 ft from s line. C. A. Pennell, Archer City, W. E. Sullivan, 40, 1, 1918, TE&L sur, 150 ft from n and w lines. Iron Mountain Oil Co., Tulsa, Okla., J. L. Jordan, 225, 1, 1903, TE&L sur, 1193 ft from e and 150 ft from s line. Mitchell Cooper, Olney, J. P. Dunagan, 68, 7, S 163, TE&L sur, 1050 ft from n and 150 ft from w line; 6, 300 ft n of 7. Marcus et al, Wichita Falls, B. B. Teague, 100, 1, 1464, TE&L sur, 150 ft from n and 866 ft from e line. W. D. Cline, Wichita Falls, M. M. Burris, 80, 1, 1355, TE&L sur, 150 ft from s and e lines. A. J. Pepper, Abernathy, E. F. Brown, 50, 1, 258, TE&L sur, 800 ft from e and 1325 ft from s line. B. L. Mollenkopf, Olney, A. C. Watson, 60, 1, 250, TE&L sur, 567 ft from w and 789 ft from s line.

ZAPATA COUNTY—(Amended location)—Trevino Oil Corp., Laredo, M. Trevino, 40, 2, S 412, 365 ft from n and 150 ft from w line, blk 15; 3, 365 ft from w and 150 ft from n line.



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SOUTH TEXAS

Magnolia Increases Outlet for Duval County, Atlantic Rumors Will Not Down and Independents Plan a Line

EARL POST, *Staff Representative, San Antonio*

Two In and Two Expected In Zapata County

San Antonio, Texas.—Allied Oil & Gas Company and Allen & Morris are developing a valuable producing spot in the Escobas field of Zapata County. Two more producers, Gutierrez 34 and 35, are making 75 barrels each from total depths of 1467 and 1474 feet, respectively. The company has drilled a number of producers to the second sand in the field and has an unusually large daily output. They are on Share 4, Comitas Grant.

Two more tests are in process of completion in this area. The Texas Company set casing at 1193 feet in Jennings 10, Cerrito Blanco Grant, and is drilling in. The same report comes from Shankle and Newton Oil Company's Trevino 18, which has casing set at 1230 feet. It is on Block 14, Survey 65.

In semi-wildcat territory, F. M. Blair's Montemayor 1, Block 1, Survey 63, is showing interest. It has passed the two sands of the field and is preparing to test a third horizon. Casing has been set about 1700 feet.

Bobrose Has All the Luck In Dunlap Crevice Area

San Antonio, Texas.—A couple more dry holes are reported in the Dunlap area of Caldwell County, where crevice production recently was established. Dickson and McDowell et al's G. C. Walker 1, tested dry at 2138 feet, drilled to 2477 feet in the Del Rio and was given up as a bad job. The same fate befell Townes and Porter's Dunlap 1, which showed saturation at 2105-45 feet and was shot with 50 quarts. It was deepened to 2328 feet in the Buda and abandoned.

Two more tests are dry in the expected pay, but have not been definitely abandoned. Hadley and Buchanan's M. C. Nugent 1, 1000 feet south of production, topped the chalk at 2156 feet, showed broken formation and set casing, it bailed dry when drilled in and is now standing at 2223 feet. Owens & Gunby's Dunlap 1 topped a broken formation at 2114 feet, topped the chalk at 2142 feet and went to 2257 feet, where it is standing for orders. It showed for possible production.

The one bright spot of the week in the area is in Bobrose Oil and Refining Company, Inc.'s Walker 1-B, one mile northeast of the Pierce discovery well. It recently showed oil from 1770 feet to its total depth of 2460 feet. It bridged several times, had a fishing job and a few other difficulties, but is now swabbing at a rate of 200 barrels daily. It stands 1750 feet in oil and will not lower with the swabbing.

Failures Prove Guadalupe County Well from Crevice

San Antonio, Texas.—That Sal-Mar Oil Company's A. H. Zunker 1, Bollinger survey, Guadalupe County, is a crevice producer from the Austin chalk has been proved almost a certainty. Two nearby wells drilled through the formation and failed to produce.

Brogan and Wormser's F. A. Pfullman, 450 feet from the producer, showed sulphur water from 2330 to 2364 feet, having the top of the Edwards lime at 2340 feet. R. R. Ogden's Zunker 1 was dry on a test at 2042 feet. It topped the chalk at 1997 feet. Brogan and Wormser are preparing to drill a second well on the Harris lease.

John Camp's wildcat in the Zobroski area has been abandoned at 2406 feet as a failure. It topped the Edwards lime at 2356 feet. It is the P. K. Delaney 1, Jesus Cantu survey.

Humble Oil & Refining Company's D. J. Denman 5 in the southern part of Darst Creek is producing 75 barrels from 2547 feet.

Duval County Pipe Line Facilities Being Increased

San Antonio, Texas.—Additional outlet for the north Duval County fields is being provided by the placing in operation again the Magnolia Pipe Line Company's Fant City booster station. This station has been idle for several years, but will boost the facilities of this company's outlet from 8000 barrels to 12,000 barrels daily. The company has been taking about 50 per cent of the allowable from the wells in the North Government Wells fields, but the rapidity in which the field is being drilled necessitated additional outlet.

An independent company is reported to be in the process of organization for the purpose of building a gathering system and a pipe line about 25 or 30 miles long to railroad loading racks. Rumors are insistent that Atlantic Pipe Line Company will enter this district with pipe line from Duval County to Aransas Pass, where it has a large tank farm and dockage. Either or both will be a great help to this new territory.

Four new producers in the North Government Wells field, one in the main field and two more in the Sarnosa field to the south added nearly 5500 barrels initial production. They were: Caps and Smith's Duval County Ranch Company 2 and 3, 500 barrels each at 2419 feet and 2415 feet, respectively, both in Section 576, Sarnosa field; Humble Oil & Refining Company's Paul White 6, Section 58, Government Wells, sand 2283-2310 feet, flowed 108 barrels in 11 hours; Seacord & Putnam et al's J. W. Johnson 2, Section 44, sand 2289-2308 feet, 15 barrels an hour; The Texas Company's C. W. Freer 1, Section 45, sand 2278-93 feet, 62 barrels an hour; The Texas Company's Rihhs 1, Section 46, 2302-5 feet, 500 barrels; Windsor Oil Company's L. L. Cummings 2, Section 44, 2298 feet, 72 barrels an hour. The latter four wells are in the North Government Wells field.

The allowable for the North Government Wells and Sarnosa fields is 40 barrels per well per day plus a per acre allowable. Wells on one- to four-acre tracts are allowed nine barrels per acre additional. Wells on five to nine-acre tracts are allowed 10 barrels per acre additional and wells on 10 to 20 acres are allowed 11 barrels per acre additional. An illustration is 40 barrels base allowable, to which a 20-acre tract adds another 220 barrels, or a total of 260 barrels a day.

The regular Government Wells field, having been so far developed, is operated under a different plan, the wells being allowed a base of 200 barrels a day with an oil-gas ratio of 1250 cubic feet of gas per barrel of fluid and a maximum gas output of 250,000 cubic feet. Any well producing above 1250 cubic feet per barrel of fluid must sell the gas. Wells in this field must be equipped with meters and the charts must be preserved for the inspection of the railroad commission.

Tuleta Leads in Bee County Increase of Activity

San Antonio, Texas.—Resumption of activity in established fields and prospective producing areas, is evident in Bee County. The new Tuleta district is leading in activity, although Normanna, Southwest Pettus, North Pettus and Grayburg are included in new locations.

In the Old Cosden area, Barnsdall and Coquat are starting Leroy Roberts 2, south offset to Houston Oil Company's Newman 4, just completed. Farther south in the Southwest Pettus area, The Texas Company is starting Gremmel 6, 400 feet north of Gremmel 5. Slick Estate is spudding Ray 7, east offset to the Gremmel test.

Gulf Coast Oil Company is drilling Hicks 5 in the Normanna area, and starting R. A. McKinney 3 in North Pettus. The latter well is unusually interesting, being 1135 feet north of United Production Company's Ray 13 producer in the George Habbermacher Survey.

In the old Grayburg district, five miles west of Pettus field, where more than a dozen failures have been drilled, C. F. Nichols is drilling Kimball 1, Stephen Winship Survey. The well is 225 feet north and 40 degrees west of the discovery well. It is changing from spudder to rotary. Nichols, discoverer of the Tuleta area, has located Harris 2, 150 feet from the south and east lines of Block 7, J. Uranga Survey. O'Neill et al's Harris is 330 feet from the south and east lines of the SW SE Section 2, Ragsley subdivision of the Chittem ranch, J. Uranga Survey. Coquat et al's J. P. Harris 1, NE Section 13, is rigging up. The Texas Company's D. W. Cox, west offset to the discovery well, is a location. Nichols' Harris 2, likely will not be drilled, as a rule has been placed on the field limiting drilling to one well for 10 acres.

Railroad Commission Issues Emergency Order

Austin, Texas.—Emergency orders on the Tuleta field, in Bee County, were issued by the Texas Railroad Commission during the past week, requiring that wells be spaced 660 feet apart, and 330 feet from lease lines or division lines. A maximum gas-oil ratio of 2000/1 was also installed by the terms of this order.

A hearing on other phases of waste prevention in this field will be held in Austin on August 15.

South Texas Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BEXAR COUNTY—		
Chiquita Oil Co., Pieniazek 3, Martinez & Arocha sur	15	1469
BROOKS COUNTY—		
Ed East, R. Garza 1, Alta Mesa	*	1560
CALDWELL COUNTY—		
Bobrose O&R, Inc., Walker 1-B, S. Seals sur, swabbing	200	2460
Dickson & McDowell, et al, G. C. Walker 1, S. Seals sur	*	2477
Porter & Townes, Dunlap 1, S. Seals sur	*	2328
DE WITT COUNTY—		
J. F. Richardson, V. Taylor 1, D. Albrete sur	*	3300
DUVAL COUNTY—		
L. W. Capps & C. L. Smith, Duval County Ranch Co. 2, Sec. 576, Sarnosa	500	2419
Duval County Ranch Co. 3, Sec. 576, Sarnosa	500	2415
Clark & Cowden, Sutherland 1, sur 3	*	2956
Humble O&R Co., Paul White 4, Sec. 58, Gov't Wells	250	2310
Seacord, Putnam et al, J. W. Johnson 2, sur 44, n Gov't Wells	360	2308
The Texas Co., C. W. Freer 1, sec 45, n Gov't Wells	1488	2293
W. C. Riggs 1, sec 46, n Gov't Wells	500	2305
Windsor Oil Co., L. L. Cummings 2, sec 44, n Gov't Wells	1728	2298
GOLIAD COUNTY—		
L. Neal et al, J. M. Pettus 1, Pedro Trevino sur	*	5070
GUADALUPE COUNTY—		
Brogan & Wormser, F. A. Pfullman 1, L. Bollinger sur	*	2364
John F. Camp, P. K. Delaney 1, Jesus Cantu sur	*	2406
Humble O&R Co., D. J. Denman 5, Wm. Arrington sur, Darst Creek	75	2547
NUECES COUNTY—		
Saxet Gas Co., W. W. Walton 2, Saxet	¶20	2571
REFUGIO COUNTY—		
Houston Oil Co., F. Rooke 2, T. Mullen sur	*	3710
United Prod. Co., Fox 4, Hews & Brown sur	*	6560
SAN PATRICIO COUNTY—		
Atlantic Oil Prod. Co., Welder 4	*	5805
STARR COUNTY—		
Stryalls Oil Co., Salinas 1, Por. 80, Share 38-C	*	2384
Heard et al, Block 1, Block 4, Share 28-A, Por. 80, Rio Grande City	*	3000
TRAVIS COUNTY—		
C. R. Franklin et al, J. Wilson 1, Alexander sur	*	1210
ZAPATA COUNTY—		
Allied O&G Co., Gutierrez 33, Share 4, Comitas Grant, Escobas	75	1467
Gutierrez 34, Share 4	75	1464

Wildcat Drilling Report

(Wells shut down not included)

ATASCOSA COUNTY — Etheridge et al, McCowan-Dickinson 1, Campbell-Berry sur, 5 mi ne Jacobs pool, sp.

BASTROP COUNTY—Properties Trading Co., Frietag 1, P. Conley sur, lcn.

BEE COUNTY—Barnsdall Oil Co. & Coquat, Leroy Roberts 2, Kerr sur, move in. Fitzgerald & Pryor, Alfred Johnson 1, Marcelo Alcorle sur, nw Pettus, lcn. Coquat et al, J. P. Harris 1, sec 13, Tuleta, ru. Gulf Coast Oil Co., Hicks 5, Normanna, dk; R. A. McKinney 3, George Habbermacher sur, n Pettus, ru. Howeth and O'Neill, King Ranch 1, 7 mi ne Beeville, ru. C. F. Nichols et al, Kimball 1, Stephen Winship sur, Grayburg, set sur cas, change to larger rig; J. Harris 2, blk 7, sec 2, Uranga sur, blk 7, mov in. John O'Neill et al, J. P. Harris 1, sec 2, Ragley sub, Chittem Ranch, J. Uranga sur, Tuleta, ru. Slick-Seligson, Inc., Ray 7, Kerr sur, sw Pettus, sp. The Texas Co., Gremmel 6, Pace sur, sw Pettus, dr 600 ft.

BEXAR COUNTY—American Gas Co., Kennon 5, M. F. Rodriguez sur No. 4, Gas Ridge, set cas 2375 ft to shut off water. Alamo Nat'l Gas Co., Coreth 1, Menchaca sur, Echert, testing abt 1050 ft; Gembler 4, Menchaca sur, Echert, cas set 690 ft, prep to complete. William V. Ballard et al, S. A. Land & Dev. Co. 1-A, I. Perez sur, mov on rotary 970 ft. E. M. Carl et al, F. Gembler 1, J. Montez sur, Echert, change to rotary 482 ft. Echert et al, Edwards Heirs 1, Martinez sur, dr 2015 ft (last rept). Gatlin Oil Co., I. A. Beck 14, J. Montez sur, Echert, sp. Robert C. Hill, F. Schell 1, sec 234, Perretaux sur, dk. W. R. Swearingen et al, J. E. Halberdier 10, No. 57, J. F. Perez sur, dr 200 ft. C. J. Webster O&G Co., S. A. Sub Urr Farms 1, lot 2, blk 49, set sur cas, re-dr.

BROOKS COUNTY — Otto Woods et al, Matilda Martinez 1, Longoria League, 25 mi sw Falfurrias, sd 1450 ft for orders.

CALDWELL COUNTY — Bobrose O&R Co., Inc., Walker 1-B, Seal sur, Dunlap, td 2460 ft, swabbing 200 bbls oil, cannot lower fluid below 700 ft from top of hole. Cargill et al, Demaron 1, Dillard Cooper sur, 3 mi s Lockhart, dk. Hadley et al, M. C. Nugent 1, S. Seals sur, Dunlap, td 2156 ft, cas set 2050 ft, dr out plugs. Hickman et al, Dickerson 1, n end Salt Flats, sp. Owen & Gunby, Dunlap 1, S. Seals sur, Dunlap, td 2142 ft, cas set 1923 ft, bailed dry when dr in, dr deeper. Townes & Porter, Dunlap 1, S. Seals sur, Dunlap, td 2145 ft, cleaned out after 60-quart shot, make production test. C. J. Webster O&G Co., C. T. Robertson 1, John A. Neil sur, Webster area, dk.

COLORADO COUNTY — V. F. Neuhaus Drlg. Co., M. C. Barnett 1, sub of O. K. Winn sur, sd 4326 ft for orders. Shell Pet. Corp. et al, Rudolph Matuska 1, Joshua Henneke sur, prep to sp.

DIMMIT COUNTY—Motes-Campbell Co., Denton 1, tracts 33-34, sec 60, Denton Colony sub, 13 mi sw Carrizo Spgs., dr 135 ft.

DUVAL COUNTY—A. A. Brodbeck, Brodbeck 1, Sec. 44, n Gov't Wells, dk. Buchanan and Terrell, Hagist 1, sur 267, sp and set sur csg; Ellison 2, Sur 44, coring below 2200 ft. John F. Camp, Weil 2, sec 570, dk. L. W. Capps & C. L. Smith, Duval County Ranch Co. 2-A, sec 574, Sarnosa, lcn. Clark & Cowden, Sutherland 1, sur 3, dr 2400 ft. H. H. Coffield, Wendt 2, sur 43, n Gov't Wells, sp; Wendt 3, sur 43, lcn. Cole Pet. Co., Benavides 76, blk 8, sur 19, Cole, completing 1753 ft. DeLange & Frates, Sevier 1, sur 213, 15 mi e Gov't Wells, dk. Frank Gravis, Schallert 1, sur 255, Palangana Salt Dome, dr 953 ft. Edwin M. Jones, J. F. Williams 1, sur 131, Sarnosa, sp. Mag. Pet. Co., Wendt 3, sur 44, dk. McGinley Corp., J. A. Lundell 1, sec 48, nw Gov't wells field, dk. Harry E. Oliver, Woods & Welder 1, sur 213, lcn. Payne & Vernon, A. Roach 1, sur 457, lcn. Pet. Finance Co., C. W. Hahl 1, sec 46, n Gov't Wells, dr 1300 ft. George Parr, Benavides Ind. School District, sur 44, lcn. Plymouth Oil Co., Parr 1, blk 48, sub of Parr Ranch, San Andres Grant, dr 4485 ft. San Diego Oil Corp., Riley 1, sur 46, top sand 2281 ft, dr in and swab, 1700 ft oil in hole, run tubing; L. Bennett 2, sur 44, top sand, set cas, woc. Southwest Drlg. Co., R. Wendt 2, sur 43, lcn. Texas Co., W. C. Riggs 2, sec 46, D. Seago sur, n Gov't Wells, mov on; Ruiz 2, sec 127, C&M sur, Sarnosa, to sp; R. L. Brown 1, sur 574, Sarnosa, lcn. Thomas & Tarver, Duval County Ranch Co. 1, sur 576, Sarnosa, to sp. Whisenant, Trenchard & French Oil Co., Hahl 1, sur 44, no rept.

GOLIAD COUNTY—Benedum & Trees & Plymouth Oil Co., Parks 2, BS&F sur, dr 5240

ft, last rept. Rowan and Hope & Phillips Pet. Co., Irby 1, Maria de Jesus Ybarbo sur, lcn. Slick-Seligson, Inc., Allen 3, Slick, lcn.

GONZALES COUNTY—Luling O&G Co., DuBose 1, R. F. Whitner sur, mov on.

GUADALUPE COUNTY—Brogan & Wormser, Harris 1, L. Bollinger sur, Sal-Mar, lcn. R. R. Ogden, Zunker 1, L. Bollinger sur, Sal-Mar, top chalk 1997 ft, td 2042 ft, tested dry, dr deeper. George E. Smith, Bearing 1, L. Bollinger sur, lcn.

JIM WELLS COUNTY—Catlett & O'Neill, H. D. Miller 2, J. M. Andrate sur, ru.

KARNES COUNTY—Howeth et al, Pargman 1, Victor Blanco sur, dr 2893 ft in Jackson.

KERR COUNTY — Eastland Oil Co., Jeff Love 1-B, sec 1594, sd 2325 ft.

KLEBERG COUNTY—H. Carter & J. W. Ellis, R. H. Simmons 1, sec 7, King sur, No. 3, 6 mi s and w Kingsville, prep to re-dr 3190 ft.

LEE COUNTY — Patton Bros., Turner 1, David Hudson sur, cored hard Taylor, near base, 5515-30 ft.

McMULLEN COUNTY—Longhorn Oil Co. & American Gas Co., Lark 1, E. W. B. Scrugham sur, Calliham, sp and sd. Jacob, Buzzini & Pickett, Inc., Jacob 5-A, W. H. Jacob sur No. 8, Jacob, making lcn; Jacob 6-A, making lcn. V. G. Schimmel et al, Two Rivers Ranch Co. 1, se cor sec 59, to re-dr 1225 ft.

NUECES COUNTY—Gulf Coast Oil Co., Frank Bliss 1, sec 406, Saxet, dr 2750 ft; Perkins & LeGasse 2, sec 26, H. B. Sheppard sur, dr 2830 ft. Houston Oil Co., Harrell 2-A, sec 28, H. B. Sheppard sur, Saxet, sp. McCarthy, Rogers, Nix et al, Isencee 1, blk 12, Sheppard sur, set 475 ft sur cas, woc. Oso Drlg. Inc., N. J. Roark 2, E. Villareal sur, Saxet, dk.

REFUGIO COUNTY—Gulf Prod. Co., J. O'Conner 2, CEPT&M sur No. 40, dr abt 4000 ft. Humble O&R Co., M. V. O'Conner 1, John Kaething sur, dr 5860 ft. Edwin M. Jones, Josephine Mitchell 1-B, Refugio, td 9131 ft, plug back several ft, prep to complete. T. P. Morgan, M. F. Lambert 2, lot 3-4, Blk M, lcn.

SAN PATRICIO COUNTY—Camp & Stanolind O&G Co., Bennett 1, G. D. Paul sub, sec 8, J. J. Welder sur, dr 4010 ft.

STARR COUNTY—Combs & Crofton, Kelsey Bass 1, sec 6, Por. 75-76-77, sp. E. O. Conner, Goodrich 1, lot 5, tract 5, Por. 81, Rio Grande City, coring 1345 ft. Frank Doyno, Seabury, Geo. & Taylor 1, share 5, Por. 75, mov on rotary. Moore & Van Matre, Seabury, Geo. & Taylor 1, share 5, Por. 75, sp. Edgar Swift, Doyne 2, blk 8, share 77-A, Por. 81, coring 1430 ft. Traylor et al, La Borde 1, lot 6, tract 5, Por. 81, dr 1800 ft.

VICTORIA COUNTY—Cullen & West, Keeran 1, M. de Leon sur, dr 6300 ft. Houston Oil Co., McFadden 1-A, IRR Sur. No. 20, td 5292 ft, sidetracked 3478 ft, re-dr. Humble O&R Co., Peter Rydolph 1, McFadden, Kemper sur, dr 3270 ft. The Texas Co., A. M. McFadden 3 (wo), J. M. Rine sur, td 5832 ft, to deepen. Union Oil Co., Keeran 1, M. de Leon sur, fsh 5041 ft. Victoria Oil Co., G. Keeran 2, M. de Leon sur, sand 5831-41 ft, test 6 fourbles oil, 150 lbs pressure 2½ min, set cas, woc.

WEBB COUNTY — French Oil Corp., R. Benavides 1-S, sur 659, w Cole, sp. O. W. Killam, Smith 1, blk 6, sur 1100, 1 mi s Rosenberg producers, sand 1478-83 ft, dr in. Montex Oil Co., Vela 1, blk 4, sur 267, Carolina-Texas, dk. Norden & Morris, Gates-Kirkpatrick 2, sec 19, blk 15, Leaseholders, dr 700 ft. Newton Drlg. Co., A. Garcia 1, sur 52, Carolina-Texas, 2 mi n Rosenberg wells, dr 350 ft. South Texas Oil Co., Rosenberg 4, blk 10, sur 271, Carolina-Texas, dr 1200 ft; Rosenberg 5, sur 271, lcn.

ZAPATA COUNTY—F. M. Blair & Sons, Montemayor 1, blk 1, share 63, Escobas, sd 1642 ft for orders. Joe Cullinian, Gutierrez 1, Charco de la India Grant, dr 1495 ft (last rept). Donohoo, Stevens & Brown, A. Garcia 1, share A, blk 7, C. Redondo sur, dr 350 ft. T. J. Murray, Haynes 2, Comitas Grant, Escobas, dr 1373 ft. F. J. Searight, F. Mounz sur, Por. 18, blk 81-8a, dr 300 ft. Windsor Oil Co., J. M. Martinez 1, blk 15, W. R. Duke sur, dr 640 ft.

GULF COASTAL FIELDS

Another Line for Conroe; Humble Acquires More Acreage; Two Producers Due Next Week.

WM. V. GROSS, ***Staff Representative, Houston, Texas***

Conroe Gets Second Pipe Line; Trend Is Southeast

Houson.—Action of The Texas Pipe Line Company in building the second market outlet for Conroe field, Montgomery County, will have a tendency to accelerate development programs of operators in the field. Humble Pipe Line Company operates the only common carrier out of Conroe, but August 6 The Texas Pipe Line Company anticipates running through a new six-inch screwed line 400 barrels per day from Alpha Petroleum Corporation's recent completion.

The Texas Pipe Line Company's six-inch line will connect with two eight-inch lines from Central Texas to The Texas Company's refinery at Port Arthur at a point near Spring. While no restrictions as to per well allowable have been placed on Conroe field by the Texas Railroad Commission, The Texas Pipe Line Company, like Humble Pipe Line Company, will restrict its takings to 400 barrels per well per day for the present.

If the two pipe line outlets of the field continue restriction of takings, their combined capacities will be more than ample to take care of whatever flush can be developed between now and the middle of September, and at the same time, competition for connections which must result will stimulate drilling.

The possibility that The Texas Pipe Line Company's action in laying the carrier into Conroe field to take care of production to be developed immediately on holdings of The Texas Company is remote. The Texas Company's nearest acreage is far down to the southeast of the discovery well and that organization will wait for further geological revelation from development between present production and its holdings before making a location. So The Texas Company, as a producer, will not enter the ranks at Conroe for at least two or three months.

$1100 An Acre

A second major development of the week at Conroe was consummation of a deal whereby Humble Oil & Refining Company paid $500 an acre cash and $600 an acre out of oil for the Heep Oil Corporation-C. C. Steinberger holdings on the R. L. Cartwright Jr. 154-acre (or 171-acre) tract in the John A. Davis Survey. The deal was made on 154-acre undisputed, with a possibility of its involving 171 acres, pending the outcome of survey line litigation, which means a cash consideration of either $77,000 or $85,500, and oil payments totaling either $92,400, or $102,600.

Acquisition of this property, located southeast of Heep Oil Corporation's R. L. Cartwright, Sr., lease, places Humble Oil & Refining Company at the head of large leaseholders in the region and increases its assurance of a major portion of the field's production regardless of the trend of production. The property purchased contains one well drilling below 5019 feet in shale, for drilling of which Heep and Steinberger will be reimbursed by Humble. R. L. Cartwright, Jr., retains an eighth royalty, while J. R. Lyles retains 1/48.

There will soon be two commercial producers added to the five oil wells at Conroe. Heep Oil Corporation and Houston Oil Company's R. L. Cartwright 2 was drilling the plug at 5142 feet August 5, showing for a little better producer than Heep Oil Corporation's Freeman 1, located about 800 feet south of east, which yielded better than 1100 barrels initially. The other well due for immediate completion is Gulf Coast Drilling & Production Company's South Texas Development Company 1, located in the southeast corner of a 60-acre tract in the Theodore Slade Survey. This latter test started washing August 5 after setting a joint of screen in oil sand at 5149-57 feet. It will constitute a slight westerly extension to the productive area.

The metallic clang of breakout tongs breaking down drill pipe on Rowe & Flowers' Varner Realty Company 1 sounded like taps for the attempted three-mile extension of Conroe westward. The well had drilled to 5265 feet without reporting any shows of importance since 4225-4303 feet, where a drill stem test indicated Montgomery County was underlain by plenty of salt water, but not by much oil or gas in the most westerly of the two Ransom House Surveys. However, Gulf Coast Drilling & Production

Table Giving Important Factors in Development of Production in Conroe Field, Montgomery County, and in Areas Which May Have a Bearing on Future Production Trends Generated from the Present Center of Montgomery County Activity*

Operator and Well	Survey	Derrick Floor Elevation	Total Depth	Sub-Sea Top of Hockley-ensis	Result of Completion
Alpha Pet. Corp—So. Tex. Dev. Co. 1	A. McCown	197	5158	—3891	600 bbl; 18/64 chk; 38.4 grav; 625 lb. pressure on tubing.
Craft & Gieseke—So. Tex. Dev. Co. 1	T&NO No. 9	160	....	—4330	shut down at 4996 ft.
So. Tex. Dev. Co. 2	T&NO No. 5	...	....	....	Location
Jno. Deering—Knight 1	D. F. Wilden	126	4686	—4424?	Abn. in Fayette
Gohlson & Rycade—Alliance Tr. Co. 1	I. Kronkite	209	....	—2746	Drilling
Houston-Heep Oil Corp.—Brent 1	D. W. Collins	191	5254	—3939	Dry at total depth; to try upper sand.
Cartwright 1	J. A. Davis	217	5186	—3883	1190 bbl on 3/8 chk;
Cartwright 2	J. A. Davis	189	....	—3871	Showing for producer at 5146 ft.
Geo. Hamman 1	C. B. Stewart	181	5129	—3937	979 bbl on 3/8 chk; 38 grav; 750 lb on tubing.
Heep Oil Corp.—Freeman 1	J. A. Davis	176	5121	—3907	1100 bbl on two 3/8 chokes; 37.9 grav.
Mrs. M. E. Roberts 1	W. H. Harrison	203	5382	—3954	Abn. in salt water sand.
House et al or Ingramm—C. T. Palmer 1	(Liberty Co.)	165	5633	—4490	Dry and abn.
Humble Oil & Ref. Co.—Renn 1	S. J. McFarland	192	5420	—4221	Abandoned
Cartwright 1	J. A. Davis	179	....	....	Drilling
C. L. Dobbins 1	Ransom House	158	....	....	Drilling
So. Tex. Dev. Co. 4	T. C. Howell	...	....	....	Drilling
C. C. Steinberger 1	J. A. Davis	170	....	—3868	Drilling 4899
Lake Creek Oil Co.—Hunt 1	J. Hodge	179	4725	—4145	Abandoned
Lowrie & Young—Sunday 1	Cyrus Wickson	207	4755	—3579	Abandoned
Lilley & Red Moon Oil Co.—McDonald 1	J. A. Davis	...	....	....	Rigged up
McElroy Oil Corp.—C. A. Damuth 1	T. I. Nichlos	...	....	....	Drilling
Moore & Bruton—W. N. Hooper 1	I&GN	...	....	....	Drilling
Pevehouse Oil Co.—Sealey 1	Pevehouse	148	3988	—3568	Shut down
Rowe & Flowers—M. H. Alexander 1	Alex. McCown	205	....	—3873	Drilling
Varner Realty 1	Ransom House	170	....	—4000	Drilling
Seven Wells Corp.—Foster Lbr. Co. 1	(San Jac Co.)	199	5041	—3787	Abandoned
Smith & McDaniels—Sealey 1	J. C. Pitt	272	5017	—3708	Abandoned
Strake Oil Corp.—So. Tex. Dev. Co. 1	Theo. Slade	199	4991	—3851	Gas well, sprayed initially 125 bbl light oil.
So. Tex. Dev. Co. 2	Theo. Slade	192	5026	—3856	1164 bbl on 3/8 chk; 38.9 grav. TP 750 lb. CP 900 lb.
So. Tex. Dev. Co. 3	Theo. Slade	189	....	—3929	Drilling
Wilson Oil Co.—Liebermann 2	D. James	142	5411	—3641	Abandoned
Sprague (Foster)—Hall 2	.....	175	4316	—2754	Abandoned
Montgomery County Oil Co.—Shawner 1	.....	310	?	—2910	Abandoned
Gulf Coast Drilling & Prod. Co.—So. Tex. Dev. Co. 1	Theo. Slade	187	5149	—3957	Being completed

*Figures published herewith take precedence over those previously published in The Oil Weekly.

Company's South Texas Development Company 1 clearly indicated this week that not all of the acreage lying between present production and the Varner Realty Company 1 is to be condemned.

Another dubious aspect of property lying north of the rough arc formed by connecting up the existing producers developed this week when Rowe & Flowers' Mrs. M. H. Alexander 1 drilled to 5223 feet and then shut down to repair the rig. The contract depth on the test is 5250 feet, and it is barely possible the well may encounter something interesting in the 27 feet remaining to be drilled. If not, plans of the operator are to carry the hole to 5250 feet and then plug back to 5000 feet, sidetrack, and attempt to get at least a gas well, according to field reports.

Thus, developments for the week at least seem to be crowding the play for production at Conroe south and east of proven ground, with emphasis southeast. If Humble Oil & Refining Company's Dobbins 1, southeast of production and in the easterly Ransom House Survey, checks high and indicates a domal condition, palms of those holding acreage in that direction will itch for flush production and considerable new drilling will be precipitated. If Dobbins 1 does not check high, geological papers on fields like Raccoon Bend will be in great demand.

Heep Oil Corporation-Houston Oil Company's Brent 1, northeast outpost test, soon will be completed as a gas well with possibly a light spray of gasoline, or distillate. If its completion results otherwise, the operators will be surprised.

After Humble Oil & Refining Company's Dobbins 1, the next two wells to watch will be that company's Steinberger 1 and Strake Oil Corporation's South Texas Development Company 2. Both wells are deeper than Dobbins 1, but fall into secondary interest due to the geological importance attached to the latter.

South of Heep Oil Corporation's Cartwright production and east of Humble Oil & Refining Company's South Texas Development production in the Theo Slade Survey, Alpha Petroleum Corporation will drill a test in the M. W. Real Survey, in the center of the north 20 acres of the south 50 acres thereof. Another manifestation of the tendency of play to south and east.

Conroe's classification geologically still remains an enigma. It may be one or the other of several types of fields. Herewith is given in tabulation the most complete assembly of control points on the Hockleyensis ever published. With information that will develop during the coming week from wells drilling at critical depths at Conroe, these control points, properly tied up, may enable operators in the field to form a less vague picture of underground conditions at Conroe.

East Hackberry to Lead Louisiana Coast Activity

Houston. — With seven operations listed, East Hackberry field may be expected to continue the most active spot in the Louisiana Gulf Coast through August and September, with a probable sustained daily average production for that period equivalent to or better than the 5200 barrels a day the field now yields.

Texas Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CONROE FIELD—		
Alpha Pet. Corp., South Texas Development Co. 1	216	5158
Houston Oil-Heep Oil Corp., R. L. Cartwright 1 (wo)	1190	5186
Geo. Hamman 1	979	5129
HULL FIELD—		
Republic Prod. Co., Dolbear 97	250	2354
D. & L. Prod. Co. & Bashara, Pivoto & Hankamer 1	150	4688
ORANGE FIELD—		
Sun Oil Co., Belile 1, (wo)	*	4740
ORCHARD FIELD—		
Gulf Prod. Co., J. M. Moore 33	1000	2280
RABB RIDGE FIELD—		
Humble O&R Co. & Gulf Prod. Co., J. H. P. Davis 2	240	5365
Lockwood & Sharp 4-A	1200	5315
BARBERS HILL FIELD—		
Mills Bennett Prod. Co., Kirby 3	2000	4409
Texas Gulf Producing Co., Cornelia Barber 2	420	4309

Louisiana Gulf Coast Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LOCKPORT FIELD—		
Magnolia Pet. Co., Freyburg-Wolf 4 (wo)	250	3392
OLD HACKBERRY FIELD—		
Pop Oil Co., Ellender 1	*	2436
SORRENTO DOME—		
Union Sulphur Co., United Lands 21	*	1696

Wildcat Drilling Report

ASCENCION PARISH—Rio Bravo Oil Co., Community 1, Darrow, fsh for dr stem at 1500 ft.

CALCASIEU PARISH — Green Oil Co., Moore 10 (wo), Edgerley, prep to wo at 2121 ft. Emerson & Starck, Industrial 1 (wo), dr gbo 1400 ft, Starcks dome. Magnolia Pet. Co., B. T. Wait 2, Iowa, dr w sn 5261 ft; Bordages 9, Lockport, dr sandy shale 6833 ft. Union Sulphur Co., Moss 3, Lockport, pulling scr to dpn, td 5355 ft; Fee 769, Sulphur, stg at 4896 ft in sn and sh shwg oil; Fee 772, Sulphur, dr 1790 ft gbo. Gulf Ref. Co. of La.,

Gray 6, Vinton, dr sn and bldrs 2077 ft. Vinton Pet. Co., Mathilda Gray 5, Vinton, td 3667 ft, prep to sdtr at 2500 ft.

CAMERON PARISH—Calcasieu Oil Co., Unsurveyed Island 1, (wo), prep to pull scr; Unsurveyed Island 2, E. Hackberry, dr sn 2740 ft; Watkins 35, E. Hackberry, lcn 360 ft ne No. 33. Jim Oil Co., Erwin 7, E. Hackberry, td 3015 ft, sdtrkd at 2850 ft. Union Sulphur Co., Pure Oil Co. 1, E. Hackberry, td 8324 ft, cutting dr st at 5143 ft. Yount Lee Oil Co., School Land 11, Old Hackberry, dr hd sn 3951 ft; School Land 28, woc at 2795 ft.

JEFFERSON DAVIS PARISH—D. C. Gillette, Jester 1, 27-8s-3w, dr hd sn 3310 ft. Little City Oil Co., Jennings Norwood 1, 44-9s-3w, sd at 2710 ft.

LA FOURCHE PARISH—The Texas Co., L. L. E. Leesville 5, Leesville, pulling scr to dpn, td 3663 ft.

PLAQUEMINE PARISH—Freeport Sulphur Co., Louisiana State 1, dr cavity 1255 ft.

ST. LANDRY PARISH—Gulf Ref. Co. of La., Wilson Cochran 2, Port Barre, ru.

TERREBONNE PARISH—The Texas Co., State Lake Barre 4, Lake Barre, set 7-inch at 3776 ft, woc; State Lake Barre 16, dr shale and li, 1930 ft; L. L. E. Lake Barre 3, dr anhydrite 2702 ft.

VERMILION PARISH—Pure Oil Co., Mulvey Irrig. Co. 1, Gueydan, dr sn and shale, 3277 ft.

VERNON PARISH—Minerals Div. of Llano Co., Llano del Rio 1, 2 mi sw Leesville, sd in gbo at 1290 ft.

LOUISIANA FIELDS

Zwolle Continues State's One Important Operation With Two Deep Tests of Particular Interest.

Staff Correspondent, Shreveport, La.

Zwolle Deep Test Requires Special Expert Attention

Shreveport, La.—A crew of experts skilled in setting and cementing casing at high bottom hole temperatures is on the ground at Loring Oil Company's Bowman-Hicks 18*, Section 15-7-12, in Zwolle, where arrangements are being made to cement a string of 36-pound 8⅝-inch casing at 5272 feet. Total depth of the hole is 5277 feet. This test had a heavy salt water flow at 5272 feet the water being 172 degrees at the surface and much baroid had to be pumped into the hole. Later a core from 5272 to 5277 feet showed oolitic lime of Glen Rose age with an oil saturation.

One joint of the casing was run on the drill stem for a test during the past week which revealed that some reaming was necessary at the bottom. A string of 10-inch casing had previously been set in the well at 3950 feet. The connections have been tested thoroughly as a high pressure will be needed to secure circulation. Coils of pipe are being arranged through which the drilling mud will be pumped and cooled with ice.

*See page 30.

Zwolle Well Shot Adversely Affects Neighbor Producers

Shreveport, La.—Only four new locations were announced for the Zwolle field for the week ending August 3, the lowest number of new operations for that district in several months. There were seven completions for the same period, four of which were producers, none exceeding the 100-barrel per day mark.

Three of the producers were in the southeast part of the field while only one was in the "hot spot" of production in Section 3-7-13. This section which heretofore has been the most consistent producing part of Zwolle also recorded two of the three failures. In that section Dengail Oil & Gas Company's Nulton G-1, is pumping 75 barrels from 2419 feet. Coates Petroleum Company's Martinez 3, SE NE Section 3-7-13, was a salt water hole at 2500 feet and Nulton B-1, was dry at 2499 feet.

The shooting of a well in this section during the past week caused several nearby producers to show a curtailment in production and the fact that one well was drilled below the chalk to the Blossom or at least to the base of the chalk and abandoned as a salt water hole was blamed for salt water increasing in several nearby wells. Production in Zwolle is obtained from breaks on the chalk.

In the southeast part of the field W. C. Turnbow's Williams 2, Section 13-7-11, was completed flowing 100 barrels of oil daily by heads through two-inch tubing at 2591 feet in chalk; E. M. Thomason's Travis 1, Section 12-7-11, is flowing 100 barrels daily through 4½-inch casing at 2525 feet and Acme Oil & Gas Company's Louisiana Long Leaf 2, Section 3-7-11, was pumping 72 barrels of oil daily. J. B. Hughes' Stille 1, Section 36-8-11, was abandoned dry at 2693 feet. It is north of east field production.

Red River Parish Wildcat Passes Up Small Oil Show

Shreveport, La.—Petroleum Industries, Incorporated, last week logged the Nacatosh at 1070 feet in Madden 1, SW NE Section 21-14-10, a wildcat in Red River Parish between the Crichton and Elm Grove fields. Elevation is 214 feet. At 1135 feet the test showed a little oil and gas but not in sufficient amounts to warrant a test. The test later was drilling at 1256 feet.

Keator Starts Second Test In Natchitoches Parish

Shreveport, La.—R. A. Keator, who is already drilling one wildcat test in Natchitoches Parish, Louisiana, made location during the last week for another wildcat test in the same parish, Bastrop State Bank 1, NE NW Section 17-10-6w.

North Louisiana Field Development

Completions

Company, Well and Location	Initial Production Bbls.	Depth
DE SOTO PARISH—		
J. M. Bridges, Joiner 1, 33-11-12..	*	3000
SABINE PARISH (Zwolle)—		
J. B. Hughes, Stille 1, 36-8-11....	*	2693
Acme O&G Co., La. Long Leaf 2, 3-7-11	72	2553
E. M. Thomason, Travis 1, 12-7-11..	100	2525
W. C. Turnbow, Williams 1, 13-7-11	100	2591
Coates Pet. Co., Martinez 3, 3-7-13	*	2500
Nulton B-1, 3-7-13	*	2499
Dengail Oil Co., Nulton G-1, 3-7-13	75	2419

New Operations

CAMERON PARISH—Yount Lee Oil Co., Beaumont, Texas, Carter & Sweeny 3, 22-12s-10w, 1620 ft e 660 ft n sw cor of sec.

NATCHITOCHES PARISH—R. A. Keaton, Natchitoches, Bastrop State Bk 1, 17-10n-6w, 200 ft n and w se cor ne¼ of nw¼ of sec.

SABINE PARISH—Roberts & Sledge, Oklahoma City, Okla., Sabine Lbr. Co. 2, 5-7n-13w, 803 ft w 795 ft s from se cor sw¼ se¼ of sec. R. M. Hutchins, Tyler, Texas, Garcia 1, 4-7n-13w, 354 ft w 382 ft n of se cor ne¼ sw¼ of sec. C. H. Abbott, Shreveport, Nulton 1, 2-7n-13w, 330 ft s and e nw cor se¼ of ne¼ of sec. M. J. Kissick, Many, Buvens 1, 2-7n-11w, 250 ft n 95 ft w se cor ne¼ ne¼ of sec. Abbott & Rankin, Shreveport, Towery 1, 1-7n-13w, 1650 ft e and 1650 ft s nw cor of sec. E. D. Holcomb, Shreveport, Quaeyhaegan 2, 11-7n-11w, 200 ft e and 145 ft n of sw cor of sec. Paul L. Miller, Kilgore, Texas, Lucius 1, 31-8n-10w, 250 ft n and 250 ft w se cor ne¼ sw¼ of sec. J. Ray Murray, Shreveport, Lefkovits 1, 5-7n-13w, 210 ft s and 330 ft w of ne cor of sec.

Wildcat Drilling Report

(Wells shut down not included)

BEAUREGARD PARISH—DeRidder Dev. Co., McMahon 1, ne nw 33-2s-9w, tested dry slight gas show, arr deepen, td 1188 ft.

BIENVILLE PARISH—Black Lake Dev. Co., Frank Halston 1, se se 17-18-16, dr chalk 2599 ft.

BOSSIER PARISH — Steckol & Breazeale, Nattin 1, sw ne 15-22-14, dr gmbo 350 ft.

CADDO PARISH—Jno. W. Moffitt, Cynosure 1, 36-18-15, lcn. Louanna O&G Co., Cushman 1, ne sw 33-19-16, dr lime 2348 ft.

CLAIBORNE PARISH—Leue Oil Co., Kinder 1, 2-21-7, owdd, co td 3500 ft. United Gas Pub. Serv. Co. et al, Warren Brown et al 1, 12½ cas 513 ft, dr 3000 ft.

DE SOTO PARISH—E. T. Oakes, Johnson 1, 30-13-15, core 3790 ft brown shale. De Soto Dev. Co., Nickie 1, 7-13-12, rig. Coker et al, Boone 1, 12-10-11, 10-inch 60 ft. Donly Bros., H. Smith 1, 31-14-15, wo fuel, 2470 ft shale. Walters & Nicholson, Jim Guy 1, 3-11-13, arr core 2750 ft.

GRANT PARISH — Security Pet. Corp., Swope 1, 16-9-1e, wosr 1585 ft. Robichaux et al, Bradford 1, 16-9-1e, rig.

MOREHOUSE PARISH—Feagel & Kalil, Davenport 1, 28-21-6e, sp cemt 12-inch cas 119 ft.

NATCHITOCHES PARISH—Saline Bayou

Dev. Co., Bodcaw Lbr. Co. 1, sw sw 9-12-5w, dr rock 815 ft. R. A. Keator, Bastrop State Bank 1, ne nw 17-10-6, lcn. Rains et al, Beard 1, 8-8-10, dk.

OUACHITA PARISH—Monroe Oil & Roy. Co., Thieler 1, se nw 34-18-2e, sd 112 ft.

RED RIVER PARISH—C. F. Davis, Peterson 1, sw nw 12-14-11, dk pat. Petroleum Ind., Inc., Madden 1, sw ne 21-14-10, elev 214 ft, top Nacatosh 1070 ft, tested slight show oil and gas 1135 ft, dr 1256 ft chalk.

SABINE PARISH—R. L. Gay, Tr., Long-Bell A-1, nw nw 10-8-13, sd 6150 ft, hd shale. Loring Oil Co., Bowman-Hicks 18, 15-7-12, running 8⅝ cas, td 5277 ft oolitic lime (Glen Rose). King, Tr., Davis 1, 29-7-11, lcn. State Prod. Co., Davis B-1, 17-7-10, dk. G. E. Jordan, Dew 1, sw se, 34-8-11, sp dr 150 ft. W. S. Smith, Hamilton 1, ne ne 32-8-11, dk. Langford et al, Sabine 1, 8-7-13, dk. Wurtsbaugh & Torrens, Peterson 1, 26-8-13, lcn. Bridwell O&G Co., Billbray 1, se nw 32-8-11, 6-inch cas 2236 ft, arr dr plug; Billbray 2, ne sw 32-8-11, lcn. H. C. Maulding, Moores 1, se ne 16-7-13, rig. Triangle Drilling Co., La. Long Leaf 1, se se 11-6-11, dr 1500 ft. J. H. Askew, Henderson 1, sw se 31-8-10, dr shale 1800 ft (formerly carried V. V. Bull et al). A. D. King, Tr., Webb 1, nw nw 31-8-11, sp dr 150 ft. Pelican Nat. Gas Co., Buckley 1, nw nw 6-7-10, sp dr 1213 ft. Paul Miller, Tr., Lucius 1, ne sw cemtd 6-inch cas 2430 ft. R. W. Boulding, Williams 1, 7-7-10, blg, td 2628 ft. Magnolia Pet. Co., Williams 1, 6-7-10, sp sd 2050 ft, dr water well. H. W. Perritt, Brown Lbr. Co. 1, 6-7-10, owdd, co, td 2753 ft. Ben Merritt, Tr., Chadick 1, sw ne 31-8-10, dk. Bee Oil Co., Hill 1, 32-8-11, rig. I. Daniels, Armstrong 1, se nw 31-8-10, dk.

VERNON PARISH—Llano Coop Colony, Fee 1, nw ne 34-2n-9w, arr set 10-inch cas 1300 ft.

WEBSTER PARISH—Geo. Pearce, Ambrose 1, sw se 22-20-10e, sp sd 50 ft repr boiler.

WINN PARISH—P. V. T. Oil Co., Southern Bag & Paper Co. 1, nw sw 28-13-5, cemtd 10-inch cas 63 ft.

ARKANSAS FIELDS

Stanolind Sells Arkansas Holdings to Ruston

El Dorado, Ark.—Ruston Drilling Company, one of the larger independents in the North Louisiana-Arkansas territory, has announced purchase of the holdings of Stanolind Oil & Gas Company in the Smackover field—35 producing wells with approximately 500 barrels daily production. The operating personnel will be retained for the present, the announcement said. Headquarters of Ruston Drilling Company, of which T. L. James is president, are at Ruston, Louisiana.

Block Acreage for Wildcat Test in Pigeon Hill Area

El Dorado, Ark.—Pigeon Hill Oil Company, composed of Joe Hurley and associates, has blocked 3000 acres centering in Section 3-17-12, Union County, Arkansas, in the Pigeon Hill wildcat area, for a 3500-foot test which will be drilled in NE Section 9-17-12. The block has a subsurface high with 75 to 100 feet closure and geologists say it is an area of excellent sand conditions. Hurley has drilled four previous wells in this general area. One test drilled in Section 5-17-12 had interesting oil shows in the Nacatosh at 2318 feet, in the Meekin sand at 2559 feet, in the Graves sand at 2700 feet and in a sand zone in the red beds at 3065 feet.

Arkansas Field Developments

Wildcat Drilling Report

(Wells shut down not included)

CLEBURNE COUNTY—F. S. Craver et al, Doniphan Lbr. Co. 1, se nw 34-11-9, lcn.

DREW COUNTY — Cooperative Dev. Co., Ogles 1, 35-13-5, dr chalk 2900 ft.

FRANKLIN COUNTY — Ozark Nat. Gas Co., Monroe 1, 13-8-29, dk.

LINCOLN COUNTY—L. B. Cook, Tr., McGehee Pltg. Co. 1, 5-8-7, sd 2985 ft.

LITTLE RIVER COUNTY—Harrell et al, Taafe 1, sw nw 25-12s-32w, sp dr 50 ft.

MILLER COUNTY—Fitzwater et al, E. L. Beck 1, sw se 35-15-26, 7-in OD cas 2919 ft, td 2926 ft. C. J. Norsen 1, se sw 20-15-27, rig; E. A. McCowan 1, nw se 22-15-28, dk. Fred Peterson, Fouke 1, 11-17-27, dk pat.

OUACHITA COUNTY—Copenhaver et al, Berg 1, 13-15-17, wosr 2208 ft.

PIKE COUNTY—Kentucky-Ark. O&G Co., Inc., East 1, 13-9-23, rig.

ST. FRANCIS COUNTY — Kentucky-Ark. O&G Co., Inc., Britton 1, ne nw 1-1n-1e, dr 2470 ft.

WASHINGTON COUNTY—Chase & Rogers, Cunningham 1, sw ne 14-15n-32w, wo cas, 1750 ft.

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NEW MEXICO . . . ROCKY MOUNTAIN

Hobbs Wells Limited to 157 Barrels Each Daily. Opening of Refinery Gives Bannatyne; Greybull Also.

Staff Correspondent, Casper, Wyoming

Lowered Nominations Cuts Hobbs to 25,000 Barrels

Hobbs, New Mexico.—The production allowance of the Hobbs field was cut from 29,500 to 25,000 barrels daily beginning with the August 1 proration schedule as result of two of the purchasing companies having ordered a reduction in their nominations. Atlantic Oil Producing Company lowered its takings from 5500 to 4500 barrels, and Shell Petroleum Corporation reduced its nominations by 3000 barrels, thus surrendering the increased volume of oil absorbed beginning July 1 when the former company cut its takings from 8500 to 5500 barrels daily. This switch prevented a reduction in production in July.

The revised proration schedule prepared by Umpire C. G. Staley credits the Hobbs field with an estimated open flow potential of 1,005,658 barrels daily from 159 flowing and pumping wells, located on 136 40-acre units. Under the new proration allowance the output will average 157 barrels daily per well.

Atlantic Oil Producing Company has been lowering its takings from the Hobbs field to offset steadily mounting production being developed by the company on its large group of properties in the East Texas oil field. Shell Petroleum Corporation anticipated a loss by proration restrictions in its purchases in West Texas in July and agreed to temporarily absorb the 3000 barrel cut in nominations made by Atlantic Oil Producing Company at Hobbs. The cut in West Texas did not materialize, and Shell Petroleum Corporation elected to resume its normal takings from the Hobbs field which amounts to 10,000 barrels daily, or considerable more than any other purchaser.

Recent Greasewood Results Leave Nothing to Tie To

Greeley, Colo.—Recent results obtained in the Greasewood district, Northeastern Colorado, have contributed only more puzzling information to that already amassed on the territory. The Manning & Terry operation a half mile east of the nearest producer, is apparently in the Dakota sand with no showings apparent. Well is bottomed at 6720 feet, 11 feet in fine gray sand carrying sulphur water. The Muddy sand was believed identified at 6611-50 feet and only streaks of sand carrying some saturation were found. The crew has run 6600 feet of seven-inch casing and cemented it, and a test of the Muddy showings will be made. No decision has been made about deepening the well to the Lakota. It checks 80 feet lower than the nearest producer. To the northeast of the nearest producer, Ohio Oil Company's well is running 15 feet higher on the Timpas lime; a fault is presumed to run through the field, but its direction is undetermined. The well ran casing to 6590 feet, and will probably be the next completion.

About 12 miles northeast of the operations reported above, Tulsa-Fort Morgan Oil Company has a cable tool operation in Anthes 1, which is checking high structurally. It is below 2650 feet, carrying 10-inch casing to set on top of the Hygiene sand expected around 2290 feet; some operators believe it will not be found before 2850 feet. Rotary will be used to deepen the well if the Hygiene is not productive.

Refinery Revives Work in Greybull Dome Area

Basin, Wyo.—Four wells are active in the Greybull dome and one in the old Torchlight shallow field, in Big Horn County, Wyoming. Greybull Oil & Refining Company has a new topping plant recently completed. The company was recently organized by Dockery and Pelton, formerly with the Yale Oil Corporation at Billings, Montana. The plant will have a charging capacity of 100 barrels and will run crude from the greybull and Torchlight fields. A completion in the Torchlight sand, Greybull dome, was reported last week; it is a small well, producing 49.7 gravity oil at the rate of about four barrels per day.

Whitlash Producing Limits Soon Will Be Made Known

Sweetgrass, Mont.—A definite knowledge of the extent of the oil producing area in Whitlash field, northern Toole County, is being gained as the various tests to the south and west are drilling into their objectives. The Cap Oien test, on Section 26 (as are all of the wells now under way) is another abandonment in the territory which was presumed to be oil-bearing, the first having been drilled to completion by A. E. Crumley, south of Western Natural Gas Company's Hicks 1, the "discovery" oil well. Craig Drilling Company's well on the same section drilled to 2620 feet, and then plugged back to the first sand at 2450 feet, to make a test there. Blackie White's test is drilling below 2212 feet, and should be nearing its objective in the second sand this week.

Garland-Byron District Test Seeks Madison Lime

Lovell, Wyo.—A new operation got under way last week in the Garland-Byron district, Northern Wyoming. Allen Oil Company, with its affiliated Pacific Coast interests, is building rig for a test to the Madison limestone on Lot 52, NW SW Section 33-56-97, one location south of the company's production on what is believed to be the axis of the structure. It is believed that the axis swings south from the shallow production in the field. The new test will be about seven-eighths mile south of the original Ohio Oil Company discovery well and about one-half mile north of the gas well in the Greybull sands, on Lot 61. The Torchlight sand is mapped here at 1600 feet, so that a Madison completion might be expected at 4500 to 4600 feet.

Ownership Change Revives Activity at Bannatyne

Collins, Mont.—Seventeen producing wells, the oil pipe line, and the refinery in the Bannatyne field, 45 miles north of Great Falls, are being taken over by the newly-organized Bannatyne Pipe Line & Refining Company, composed of the Drake-Jones interests of Minneapolis and the Withers interests of Montana. The wells are to be cleaned out and put on production at once, and a deep test is to be drilled this summer to test the lower sand possibilities.

Bannatyne field has been idle for the last two years because of suspension of Sterling Oil Corporation, which owned the refinery. The Withers interests have purchased the Hardrock Oil Company leases on which there are four producing wells, and the properties of the Producers Syndicate, Sterling Oil Company, and others. Other acreage in the field which is not controlled by the new company is held by the "56" Petroleum Corporation, Atlantic-Pacific Oil Company and Texas-Pacific Coal & Oil Company. There are 32 wells in the field.

Bannatyne field was discovered in 1926 by the Genou Oil Company. Producing sand is 80 feet in thickness and is found around 1500 feet.

Red Lodge, Mont.—Ohio Oil Company is building a new rig in the Dry Creek field, Southern Montana, for Souders 9, Section 2-7-21, about 40 feet east of the first well drilled on this lease. The company's Robinson 7 is showing gas from the Dakota sand with the well bottomed at 5536 feet where 8⅝-inch casing is set. Caldwell 8, Section 17, is in the red beds at 6515 feet and the Bowman 11, Section 4, is in shale below 4560 feet.

Mountain States Field Developments

NEW MEXICO

New Operations

SANTA FE COUNTY (Crowe Butte structure)—Kelsye Clients 1, 26-10n-10e, spdg 250 ft.

Completions

Company, Well and Location	Initial Production Bbls.	Depth
EDDY COUNTY—		
Oil Well Drl. Co., State 1, Sec. 21-21s-26e	*	1185

Wildcat Drilling Report

(Wells shut down not included)

BERNALILLO COUNTY—Norrins Realty, Pajarito Grant 1, 22-9n-1e, dr 2210 ft.

CHAVES COUNTY — Warman Oil Trust, Evans 1, 15-14s-25e, sd to finance 1433 ft. R. D. Compton, sw se 20-10s-24, spd grey lime 315 ft.

DE BACA COUNTY — Montgomery et al, Wood 1, sw 6-4n-20e, fsh tools 4662 ft. Landowners Oil Co., State 1, ne 16-1s-27e, ur 6⅝ inch at 4954 ft, to set at 5015 ft.

DONA ANA COUNTY—Middle States O&G Co., Boretzi 1, 14-26-5e, rig.

GUADALUPE COUNTY—N. M. Prod. & Ref. Co., McMillan 1, 24-5n-16e, wait for orders 4507 ft.

HARDING COUNTY — Carbon Dioxide Corp., Tinsley 1, 31-21n-31, dr 650 ft.

LUNA COUNTY—Angelus O&M Co., State 3, se 30-21-10, cas 6171 ft.

RIO ARRIBA COUNTY—Governador Oil Co.'s 1, se 14-29n-7w, sd 2642 ft.

ROOSEVELT COUNTY — Peterson et al, Good 1, se ne 32-5s-30e, rig up.

SAN MIGUEL COUNTY—Cabra Springs O&G Co., Thompson 1, ne 21-12-22, chang to steam, td 2540 ft.

SOCORRO COUNTY—J. C. Green et al, 1, 15-2n-5w, dr res 300 ft.

VALENCIA COUNTY—Western Nat'l Resources, No. 1, 15-2n-5w, spd.

WYOMING

Completions

Company, Well and Location	Initial Production Bbls.	Depth
NATRONA COUNTY (North Casper Creek)—		
Lakota Oil & Gas Co., 6, 36-36-82	¶3 to ¶5	1135
WESTON COUNTY (Osage Field)—		
Chadron-Osage Oil Co., 17, nw sw 14-46-64	130	2028-38

Wildcat Drilling Report

(Wells shut down not included)

CARBON COUNTY—Midwest Refining Co., U. P. 27, 11-20-81, will probably abn 4395 ft.

CONVERSE COUNTY—John Ackard, se 24-33-72, sd to refinance 2020 ft. Converse O&G Co., sw sw 27-33n-72w, fsh job successfully completed, dr 2310 ft.

CROOK COUNTY—St. Onge O&G Co., ne se 20-53n-61w, spdg.

FREMONT COUNTY—Ward O&G Co., 28-34-90, sticky gumbo, dr 3210 ft. Yellowstone Oil Co., Gabus 1, sw 14-38n-94w, dr 2300 ft. Premier Oil Co., 7-28n-92w, lcn.

LINCOLN COUNTY—H. C. Harris et al, se 14-21n-117w, dr bel 1550 ft.

NATRONA COUNTY—Mutual Oil Synd., Midway 2, sw se 14-36-79, dr bel 5800 ft. Summit Oil Co., Trevett 1, 21-33-80, dr 1400 ft.

SWEETWATER COUNTY—Vermillion Oil Co., sw se 16-12n-99w, mvg in to resume 4685 ft. Hidden Treasure Oil Co., se sw 11-20n-104w, resum 1720 ft.

UINTA COUNTY—Transwestern Pete Co., Ltd., (Doherty) 6-14n-118, dr 4040 ft. Park City O&G Co., ne nw 16-15n-113w, dr bel 2968 ft. Bear River Oil Co., Ltd., ne se 18-15n-120w, gas show 1000 ft.

WASHAKIE COUNTY—Bales Oil Trust, Brome 1, ne nw 31-48n-90w, dr 1510 ft.

WESTON COUNTY — Julius Peters et al, Weitzell 1, sw nw 30-46-64, dr up bailer 4435 ft. Gose Synd., ne 28-37n-63w, mvg in cable to dd 5050 ft.

MONTANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LIBERTY COUNTY (Whitlash Field)—		
Oiens et al, Hicks 1, se ne 26-37-4e	*	1450
R. C. White et al, Hicks 1, ne ne 27-37-4e	*	2220
Postelwaite et al, sw ne 26-37-4e	*	2625

Wildcat Drilling Report

(Wells shut down not included)

BROADWATER COUNTY—Capitol O&G Co., nw 7-8n-1e, dr bel 2200 ft.

CARBON COUNTY—Corbett Royalty Co., sw se 1-6s-23e, standing 1150 ft. Jack Creek O&G Co., se 15-7s-23e, dr 600 ft. Midland Oil Co., nw 24-6s-23e, sd.

CARTER COUNTY—E. T. Moorehead, sw 34-4s-57w, wait for 12½ inch at 350 ft.

CASCADE COUNTY—Buscher & Cassady, Johnson 1, se 19-22-3e, dr 1635 ft. Charles Merz et al, Sheffels 1, nw 4-21-4e, run cas 1725 ft.

FALLON COUNTY—H. W. MacDonald's 1, sw 28-8n-60e, dr bel 1900 ft.

FERGUS COUNTY—Melton Corp.'s 1, sw 24-21n-17e, dr and carry 8¼-inch bel 3170 ft.

GALLATIN COUNTY — Montana Gas & Pete Corp., Adams 1, 35-1n-2e, refinancing, td 1650 ft.

GLACIER COUNTY—Finn et al, McLellan 1, nw se 12-34-6w, rig up. Blackfeet Petroleum, ne 28-36n-12w, delayed by metal in hole 3200 ft. Tarrant et al, Yunck 1, nw nw 12-34-6w, rig up, ready to spud. Tarrant et al, Browning Dev. Co.'s Reickhoff 1, ne 3-34-6w, spdg 300 ft. The Texas Co., Carl E. Peterson 1, se ne se 22-36n-6w, dr 2250 ft.

GOLDEN VALLEY COUNTY — Golden Valley Oil Co., 2-6n-22, may abandon 3335 ft.

HILL COUNTY—Fargo Oil & Gas Co., n 29-37n-15e, spd.

LIBERTY COUNTY — Northland O&G Corp., Yurman 1, sw 32-33-5e, ready to resume 2815 ft. Peoples O&G Co., nw 17-35-6e, redr around 1750 ft, td 2100 ft. Dohm et al, Millen 1, sw 10-37-5e, dr (depth not reported).

MUSSELSHELL COUNTY — Minnesota-Flatwillow Pete Co.'s 1, sw 7-11-31e, try for wso, td 2800 ft.

PHILLIPS COUNTY—St. Cloud O&G Co., sw ne 20-34n-24e, dr 500 ft.

PONDERA COUNTY—Bell-Adams, Venetz 1, ne 31-27-4w, dr res 920 ft.

SWEETGRASS COUNTY—Shoshone Consolidated Oil Co., nw nw 23-2n-15e, fighting water, td 5790 ft.

TETON COUNTY—California Co.'s Sullivan 1, nw 34-28-7, fsh lost tools 3600 ft. Earl Oil Co., ne se 22-22n-8s, dr res 3860 ft.

TOOLE COUNTY—Oregon Synd., se 20-36-2e, try to pull cas to plug back from 2580 ft.

VALLEY COUNTY — Opheim O&G Co., ne 28-37n-38e, mvg in.

YELLOWSTONE COUNTY—Spokane-Laurel Oil Co., sw se 30-2s-24e, sd to finance 1390 ft. Peter Antonioli, ne ne 2-2n-25e, wait for cas 2370 ft.

COLORADO

Wildcat Drilling Report

(Wells shut down not included)

ADAMS COUNTY—Hills Dome Lease Dev. Co., se 27-3s-68w, cem, td 4025 ft.

ARAPAHOE COUNTY—McDeb Drlg. Co., Fitzsimmons 1, ne 7-4s-68w, dr 6110 ft.

ARCHULETA COUNTY — Oil City Pete Co., Fitzhugh 1, sw 34-33n-13, sd for pipe, gas show 717 ft.

DELTA COUNTY—Black Canyon O&G Co., 2, Lot 12, 5-15s-94, install larger rig 330 ft.

EL PASO COUNTY—Gulf States Oil Corp., Carson 2, ne 10-16s-66w, dr out plug 2000 ft.

GRAND COUNTY—Oil & Mineral Lands, Inc., McElroy 1, se sw 14-2n-81, resum at 618 ft.

LA PLATA COUNTY—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, rig up. Phipps et al, sw 9-33-13, td 520 ft.

LARIMER COUNTY—Mayer et al, Reed 1, nw 28-4-60, sd 3800 ft.

LINCOLN COUNTY—Eastern Colorado Oil Corp., State 1, nw 36-14s-57w, dr 3426 ft.

MONTROSE COUNTY—Uncompahgre O. & G. Co., Vandemark 2, 27-50n-10, td 800 ft.

MONTEZUMA COUNTY—Oliver, Downey, Smith et al, nw se 31-36-17, spd.

PARK COUNTY — South Park O&G Co., Milligan 1, se 13-8s-76w, dr 3016 ft. South Park O&G Co., Esche 1, ne 5-9s-76w, co and fsh pipe, td 2470 ft.

WELD COUNTY — Tulsa-Ft. Morgan Oil Co., Anthes 1, ne ne 24-8n-59w, ur 10-inch at 2400 ft, to set 2550 ft. Ohio Oil Co., Butters 1, 7-6n-60w, sd, dr pipe stuck, td 6680 ft. Manning & Terry, Niles 1, ne ne 13-6n-61w, prep to set 7-inch 6595 ft, td 6720 ft.

WASHINGTON COUNTY—Middlemist Oil Co., et al, sw se 14-4s-56w, cem cave 1575 ft.

SOUTHEASTERN STATES

Another Jackson Area Well Has Show of Heavy Oil in Week Otherwise Quiet. Big Tract to be Investigated.

Jackson Gas Field May Yet Develop Oil Production

Jackson, Miss.—Another test in the Jackson gas field reported a show of heavy oil, similar in gravity to that found in several previous tests that tested about 13 gravity, during the past week in Fred Henslee's Warner 1, NW NE SE Section 14-5-1e, Rankin County, in the southeast part of the field, a test south of production. The oil appeared without water, reports said, after the well was bailed dry following cementing of 6⅝-inch casing at 2465 feet. Previous shows of heavy oil near the top of the Midway chalk in Jackson have been accompanied by much salt water. The first test to show such oil was in the early days of the field in 1930 when Gulf Refining Company's Rainey A-1, Section 13-5-1e showed oil and salt water. Two or three subsequent tests had similar shows.

One Failure and One Start Mississippi Week Results

Jackson, Miss.—James A. Alexander, Trustee's Holmes 1, SW NW Section 31-6n-2e, Rankin County, Mississippi, was abandoned during the past week as a dry

hole at 2528 feet in Midway chalk which was logged at 2525 feet; elevation is 272 feet. The well checked low on the top of the Midway black shale which was logged at 2438 feet.

One new location was announced for Jackson, Ridgeway and McGehee's Mosal 2, SE NE SW Section 24-6-1e, Hinds County, a north edge test. Love Petroleum Company has taken over Interior Oil Company's Moore 1, NW NW Section 28-6-2e, Rankin County, which was abandoned at 900 feet two years ago, and is arranging to deepen it.

Lamar County Test Continues Below 3000 Feet

Mobile, Ala.—P. J. McAlpine and associates during the week ending August 3 reached contract depth of 3000 feet in Gardner 1, NW NW Section 22-15s-17w, Lamar County, Alabama, but are continuing ahead, just to what depth has not been announced. Reports at the end of the week were that the well was at 3005 feet in shale in which formation it had been for the preceding 60 feet. This is 248 feet below a salt water sand encountered at 2727-2757 feet; elevation is 324 feet.

Latest reports showed that Ohio Oil Company's Bethel 1, NW SW NE Section 34-3s-2w, Mobile County, Alabama, was drilling sandy shale at 4204 feet. This is a 7000-foot test, which however may for the present be taken only to 5500 feet.

South Mississippi Test Drilling Below Salt Water

Jackson, Miss.—Stauffer & Kouri, Trustees' Bond 1, SW NE Section 18-2n-14w, Lamar County, south Mississippi, showed 1980 feet of salt water in 14 minutes last week when a drill stem test was made in 40 feet of broken lime of Jackson age at 2272-2312 feet. The well was later drilling broken lime at 2320 feet. The Vicksburg was logged in this test at 1350 feet and the Jackson at 1565 feet.

Geologists Start Work on Big Mississippi Tract

Jackson, Miss.—Geological work which will include all the Eastman-Gardiner Lumber Company's several hundred thousand acres of cut-over land holdings in five south Mississippi counties—Jones, Jasper, Covington, Smith and Wayne—as well as holdings of others has been started by a party of geologists directed by Dr. Arthur C. Trowbridge of the geology department of the University of Iowa. One of the plane-table parties is headed by Dr. Edwin Rowser, also a geologist, who is assisted by H. G. Guest, graduate geological student of the University of Iowa. All likely areas found in this big block will be core-drilled, the plane-table work to extend until next December. In Covington County core drilling is to begin at once but the other counties will be core drilled as the plane table work progresses.

Southeastern States Field Developments

MISSISSIPPI

Completions

RANKIN COUNTY (Jackson)—Jas. A. Alexander, Tr., Holmes 1, 31-6n-2e . . . . . * 2528

New Operations

HINDS COUNTY—Ridgeway & McGehee, Mosal 2, 300 ft w and 200 ft n sec ne sw 24-6n-1e, sp dr 300 ft.

RANKIN COUNTY—Love Pet. Co., Interior Lbr. Co. 1, 440 ft s and e nwc 28-6n-2e, owdd, td 900 ft.

Wildcat Drilling Report

(Wells shut down not included)

LAMAR COUNTY (Purvis) — Stauffer & Kouri, Trs., Bond 1, se ne 18-2n-14w, tested 1980 ft sw in 14 minutes in ds testing bro lime 2272-2312 ft, dr bro lime 2320 ft.

LOWNDES COUNTY — Lowndes County O&D Co., Carr Est. 1, ne nw 34-17-16, sd 2100 ft (corrected depth).

MONROE COUNTY—P. J. McAlpine et al, Chas. Rye 1, se nw 22-15s-16w, dr shale 1385 ft.

ALABAMA

Wildcat Drilling Report

LAMAR COUNTY (Vernon)—P. J. McAlpine et al Gardner 1, nw nw 22-15s-17w, elev 324 ft, dr shale 3005 ft (3000 ft contract depth).

MOBILE COUNTY—Ohio Oil Co., Bethel 1, nw sw ne 34-3s-2w, 9⅝ cas 3295 ft, dr sandy shale 4204 ft. J. C. Prine et al, M&O Ry. 1, se ne sw 33-4n-2w, dr lime 2150 ft.

WASHINGTON COUNTY—South Ala. O. & G. Co., St. Stephens A-1, 26-7n-1w, dk.

FLORIDA

Wildcat Drilling Report

PINELLAS COUNTY—Pioneer Oil & Mining Co., Yerxa et al 3, 2-29s-16e, dr 1587 ft.

WALTON COUNTY—Calumet Co., Walton L&T Co. 1, se ne 7-1n-17w, dk pat. Oil City Corp., Walton L&T Co. 1, ne nw 12-1n-19w, dr sand 5300 ft.

MICHIGAN FIELDS

Hear Two Companies on Michigan Gas Line Projects

Mt. Pleasant, Mich.—The state public utilities commission in Lansing, Michigan, in August will hear the application of two companies seeking authority to lay natural gas pipe lines from the Central Michigan field to several Michigan cities, it was announced this week.

Michigan Natural Gas Corporation will submit its plans August 5. According to the application a line is contemplated from the fields to Mt. Pleasant, Flint, Saginaw, Bay City, Pontiac and Detroit.

Michigan Natural Gas Pipe Line Company will be heard August 12 and proposes to pipe natural gas to Remus, Big Rapids, Reed City, Cedar Springs, Kent City, Casnovia and Muskegon.

Midland County Deep Well Given Test for Gas

Mt. Pleasant, Mich. — Interest has been aroused here this week in Atha Drilling Company's wildcat deep hole test in Midland County, Ingersol township SW SE Section 21, which had a show of gas at 4631 feet in the Sylnania formation.

There is about 2500 feet of black water in the hole. The six-inch casing is to be pulled and a three-inch packer run, preparatory to making a test of the well's gas possibilities. The well is on the State Bank lease No. 1 and is about 13 miles east of the proven Midland area.

Walter L. McClanahan, Inc.'s wildcat test, Caywood 1, Midland County, Greendale township SE NE SE Section 36, failed to show production in the Dundee when drilled to 3480 feet. Brine was encountered at 3460 feet. It may be sunk further for a deep test of the area.

Pure Oil Company's Wampler 2, Midland County, Greendale township, SW Section 9, made 300 barrels of oil

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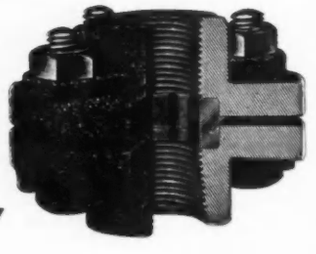

initial when partly drilled into the Dundee.

Michigan Gas & Oil Company's Bond 1, in Midland County, Greendale township, SW NW NE Section 12, was deepened from 3539 feet to 3546 feet boosting the production from 95 barrels to 325 barrels a day.

Seven new locations were made in the district during the week, six being offset locations in the east pool and the seventh a natural gas test about a mile from production.

Michigan Field Developments

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LENAWEE COUNTY—		
Joseph McGrath, McGrath 1	¶½	....
MIDLAND COUNTY—		
W. L. McClanahan, Inc., Caywood 1, Greendale, se ne se Sec. 36..	*	3480
Pure Oil Co., Wampler 2, Greendale, W½ SW¼, Sec. 9	300	3557
Thompson Bros., Rhemenschnider 1, Greendale sw ne Sec. 14	*	....

EASTERN STATES FIELD DEVELOPMENTS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
PENNSYLVANIA		
POTTER COUNTY—		
G. H. Schrack,-Tassell heirs 1....	¶20	....
WEST VIRGINIA		
CABELL COUNTY—		
Midway City Gas Co., Morrow 1....	¶½	3060
GILMER COUNTY—		
Patsy Crude Oil Co., Fisher 2	40	....
James A. Tierney, Hardman 2	10	1186
RITCHIE COUNTY—		
King Knob Oil Co., Carpenter 1....	*	2560
SOUTHEASTERN OHIO		
WASHINGTON COUNTY—		
Steward, Robinson Bros. 1	2	500
CENTRAL OHIO		
ATHENS COUNTY—		
Carpenter & Glazier, Goddard 4....	1	92
Goddard 5	*	76
Goddard 6	*	53
ASHLAND COUNTY—		
Stewart & Co., Brubaker 5	2	758
GUERNSEY COUNTY—		
George Jewell & Co., Stock 3	¶¼	1047
W. Keith & Co., Smith 3	*	450
HURON COUNTY—		
G. W. Heinrich & Co., Johnson 2..	¶¼	360
LICKING COUNTY—		
Wehrle Gas Co., Kreager 1	*	3158
C. R. & G. W. Settles, Hughes 1	2	675
MEIGS COUNTY—		
Thomas & Co., Hysell 2	¶1	900
A. N. Bengal, Thomas 1	¶¼	1107
MEDINA COUNTY—		
Edson & Co., Shaw 26	10	314
Frank 40	*	397
PORTAGE COUNTY—		
Wittmer Oil & Gas Co., Knowlton 1	¶½	482
SUMMITT COUNTY—		
Cammeron & Co., Mason 1	¶¼	3975
NORTHWESTERN OHIO		
SENECA COUNTY—		
Tiffin Industrial Gas Co., Swartzmiller 2	¶¼	....
SANDUSKY COUNTY—		
L. W. Wells & Co., Krantz 1	*	....
INDIANA		
GIBSON COUNTY—		
Knox Engineering Co., Simms 1 ..	¶2½	1513
PIKE COUNTY—		
Indiana Southwestern Gas Corp., Cassidy 1	25	1530
ILLINOIS		
EDGAR COUNTY—		
W. D. McColpin, Weiland 1	*	285
KENTUCKY		
DAVIESS COUNTY—		
Hupp, French & Co., Bratcher 2..	150	725
Cumberland Petroleum Co., & Hamilton 1	*	622
Cane Run Petroleum Co., Weatherford 4	*	810
Ellis & Ashby, Mayfield 6	*	678
Three Sands Oil Co., May 1	*	....
HANCOCK COUNTY—		
Mecca Oil Co., Newton 1	*	....
Kencal Oil & Gas Co., McHarvan 1	*	....
HOPKINS COUNTY—		
Seaboard Oil & Gas Co., Neize 1..	¶½	....
KNOX COUNTY—		
Unknown Parties, Gray 1	¶1½	2100
MUHLENBERG COUNTY—		
The Ohio Oil Co. 5-J'S Coal Co. 1..	¶1½	....
Ellis & Young, Drake Heirs 1	*	1236
OHIO COUNTY—		
Goldberg & Co., Rice 1	20	....
Jenkins & Co., Bellamy 1	¶¼	....
S. A. Cobb & Co., Ramsey Hrs. 4	*	577
L. C. Young, Allen 1	100	....
Ivyton Oil & Gas Co., Miller 12....	50	....
WARREN COUNTY—		
Morris & Carpenter, Davenport 1..	25	....
Davenport 2 1800		525

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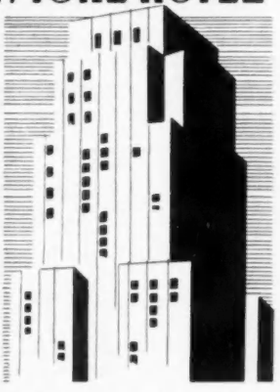

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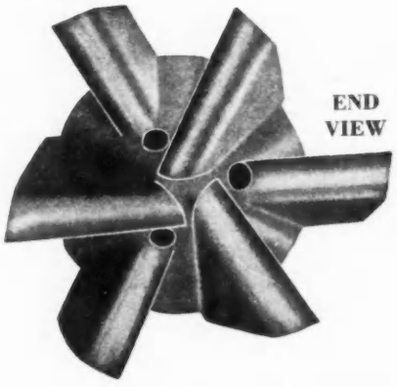

END VIEW

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New Equipment for the Field

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THE OIL WELL SUPPLY COMPANY

The Oil Well Supply Company is marketing a new pull rod and clamp that are dimensioned to the latest A.P.I. specifications. These rods are made of high-tensile steel, with the ends carefully and accurately upset. The upset ends provide a greater cross-section, and consequently greater strength and longer service.

The A.P.I. clamps are of steel and are drop forged; because their minimum cross-sectional area is several times that of the rod body, the clamps are considerably stronger than the rods. Bolts for the clamps conform to A.P.I. requirements; the ¾-inch size has a ⅞-inch x 3½-inch bolt and the ⅞-inch size a one-inch x 3⅞-inch bolt.

The upset ends of the new A.P.I. rods are normalized. This pyrometer-controlled operation relieves all forging strains and refines the grain structure, according to the manufacturer.

2. Stationary Diesel Engine

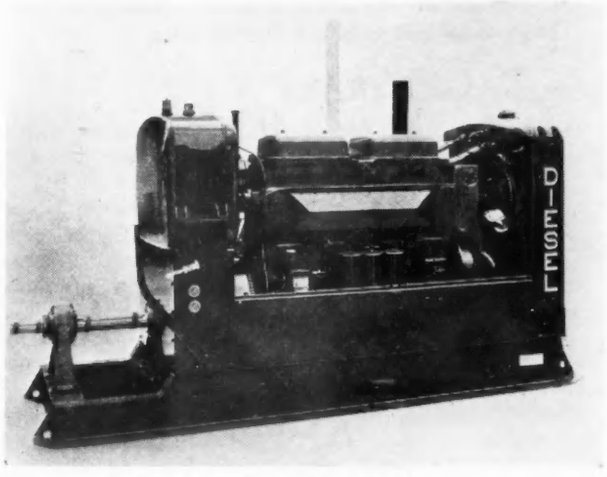
CATERPILLAR TRACTOR COMPANY

Caterpillar Tractor Company, Peoria, Illinois, has made available to the stationary engine trade a stationary Diesel engine.

This engine has a 6⅛-inch bore, 9¼-inch stroke, and is governed at 700 R.P.M., developing better than 85 horsepower. It has four cylinders, is four-cycle, and uses the solid injection fuel system, and a pre-combustion chamber.

The solid injection method of handling fuel oil on this Diesel is by means of individual pumps mounted on each cylinder. These are calibrated and sealed at the factory, thereby preserving the intended settings under operating conditions. Fuel injectors have a single orifice. A self-cleaning pintle keeps this orifice from clogging and maintains its prescribed dimension. The fuel is first injected into the pre-combustion chamber, where it is ignited by heat generated by high compression. This pre-combustion chamber prepares the fuel for the main combustion chamber in the form of a partly-burned rich, dry mixture, carrying no wet slugs, and therefore minimizing crankcase dilution and preserving lubrication on cylinder walls.

The engine is provided with a positive starting mechanism—a small two-cylinder, four-cycle gasoline engine, mounted on the side of the Diesel itself. The engine is water cooled, being connected to the Diesel cooling system. the exhaust gases of this starting engine warm the Diesel intake for ease in starting. The starting energy is imparted to the Diesel engine through a clutch and Bendix drive to the Diesel flywheel.



Caterpillar Diesel Engine

3. Electric Lantern

ECONOMY ELECTRIC LANTERN COMPANY

Economy Electric Lantern Company, 325 West Huron Street, Chicago, Illinois, announces the Model 40-UV Ecolite lantern which, according to the manufacturers, has been listed by the Underwriters' Laboratories for use in hazardous locations, Group D, Class 1, and also for casualty, fire and accident hazards.

4. Universal Choke

J. H. McEVOY & COMPANY

J. H. McEvoy & Company, Texas Avenue and Milby Street, Houston, announces the McEvoy Universal choke designed to meet the trend of Christmas tree design toward simplicity, utility and economy, and is especially adapted for installations where the top wing of the tree is to be connected to the lower wing. The Universal choke make-up offers a high salvage value, with easy dismantling, and to eliminate strain caused by inaccurate fitting. Standard stock nipples, and any type of flow line valves may be used with the choke. There are three inches of adjustment in each arm.

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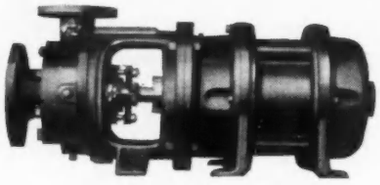
The Universal Choke needle is case-hardened steel, ground into a fluid tight seal. Due to the ground seat, this choke is usable as a valve.

5. Motor Pump

INGERSOLL-RAND COMPANY

Ingersoll-Rand Company, Phillipsburg, New Jersey, announces a line of small, general-service centrifugal pumps, ranging in capacities from five to 800 gallons a minute, for heads up to 100 feet, and one-quarter to 25 horsepower sizes.



Ingersoll-Rand Motor Pump

Both the pump and the electric motor which drives it are assembled as a single unit, both being mounted on the same shaft. No coupling or base-plate is needed; but the latter can be furnished if desired. It can be mounted upside down, vertically, or in any other position that may happen to be most convenient. There are but two bearings which are of the ball type. It has only a single stuffing box and this is readily accessible.

Open-type, totally enclosed or explosion-proof motors can be furnished.

The Motorpump will handle everything from water to near beer, and from naphtha to tanning extracts; when equipped with explosion-proof motor it will safely handle inflammable liquids, according to the manufacturer.

6. Two-Ply Stainless Steel

INGERSOLL STEEL & DISC COMPANY

Ingersoll Steel & Disc Company, Chicago, Illinois, announces a two-ply stainless steel, to be known as Ingoclad Stainless Steel, produced by a patented process from the composite ingot.

It is stated that the manufacturing process has been developed to the point where a perfect bond between the stainless steel and the carbon steel back is assured. Pump parts, drill machinery, still linings, tank car linings, etc., now will be in a position to use Ingoclad on an economical basis, according to the manufacturer.

This new stainless steel may be deep drawn, stamped, welded, formed and polished. According to R. C. Ingersoll, president, it is being produced in various gages and sizes.

Worthington Bulletins

Worthington Pump and Machinery Corporation, Harrison, New Jersey, announces availability of the following list of new catalogs and bulletins:

Portable Compressors, and Contractors Air Tools—four-page bulletin W-850-B8, illustrating complete line of equipment.

Rock Drills—four-page bulletin W-1201-S1A describing hand-held drills for light, medium and heavy duty.

Hydraulic By-pass and Check Valves—two-page bulletin D-445-S2, showing cross-section views and listing sizes and capacities.

Steam Pumps for Highly Volatile Liquids—eight-page bulletin D-111-S4 describing the Hi-VoL close clearance pump and giving simple method for calculating the actual clearance of any steam pump.

NEWS *from the* *Industry's* EQUIPMENT MAKERS

Keeping in touch with developments with Manufacturers and Supply Dealers

WM. G. COREY
President and General Manager

L. C. HARBERT
Vice-President and Sales Manager

WENDELL M. JONES
Consulting Engineer

Rotating Pumper Company Organized

Rotating Pumper Company, 1333 Santa Fe Avenue, Los Angeles, California, has been formed for the purpose of manufacturing a number of pumping, pulling and drilling units for oil field work, and to take over the world-wide distribution of oil field products made by the Pacific Gear & Tool Works.

Wm. G. Corey is president and general manager, L. C. Harbert is vice-president and sales manager, and Wendell M. Jones is consulting engineer. All are well known in petroleum circles.

Mr. Corey is manager of the oil field department for Pacific Gear & Tool Works, and will continue in this capacity. During six years with the above company he has developed many successful pumping, pulling and drilling devices. Previous to his connection with the above company, he was assistant chief engineer for the Pacific Oil Company for a number of years. As sales manager for J. P. Ratigan, Mr. Harbert covered the Mid-Continent, Gulf Coast, Texas, Mountain and Pacific Coast fields; and had charge of all foreign sales for the company. Previous to that experience he was sales representative for the Axelson Machine Company for about five years.

Mr. Jones has for the past four years been sales engineer for the Petroleum Equipment Company of California, and will continue in this capacity, as this company is the exclusive California distributor of the products of the Rotating Pumper Company. Previous to his entrance into sales work, he was chief engineer of the production department for the California Petroleum Corporation.

Products of the company include the Jones rotating pumper, the Pacific (herringbone gear) direct pumper, the Pacific (herringbone gear) dual drive pumping and pulling unit, the Pacific (herringbone gear) drilling gears, the Pacific motorized pumping jack, the Pacific band wheel drives, and the Pacific auxiliary motor drives.

Houston Firm Ships Pipe Equipment for Iraq Line

W-K-M Company, Inc., Houston, has completed shipment of five car loads of W-K-M Pipe Cleaning Machines and W-K-M Pipe Handling Equipment destined for use on the 1200-mile bifurcated Iraq Pipe Line. Two additional shipments of five car loads each, making a total of 15 cars of special equipment, will be made in the near future. This is said to be one of the largest orders of its kind ever filled in the United States, and the largest single order filled this year by any American manufacturer of special oil field or pipe line equipment. Fabrication of equipment provided for on this order, within the time allotted, required the addition of more than 50 men to the regular crew employed in the W-K-M shops at Houston.

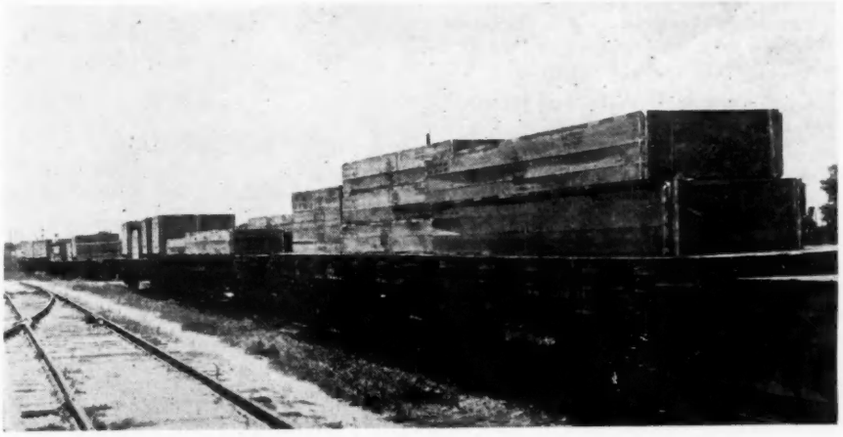
The W-K-M Pipe Cleaning Machines will be used to clean and descale the pipe used on the Iraq Lines, and the W-K-M Pipe Handling Equipment, mounted on crawler type tractors, will be used to handle the heavy 10-inch pipe during all operations.

Negotiations involved in bringing this order to a Houston manufacturer were handled in London by A. S. Crutcher, acting as special representative of the company.

Tretolite Company Awarded Verdict in Damage Suit

The suit of Dehydro, Inc., of Tulsa, against Tretolite Company of St. Louis, Missouri, alleging unfair competition and $100,000.00 damages, after presentation of testimony by both sides, has been dismissed by Judge Kennamer in the federal court, Northern District, at Tulsa. The costs of the action were placed on Dehydro, Inc.

Lee C. Moore & Company, announces the removal of its Gulf Coast district offices from the Post-Dispatch Building to 517 M. & M. Building, Houston. George I. Lynch is in charge of this office.



Initial Five-Car Shipment of W-K-M Equipment Leaving Houston for Export to Iraq.

Squeaks *from the* BULL WHEEL

ATASCOSITA CREEK, August 1, 1932.

Ye Editor
Oil Weakley,
Houston, Texas.

Dear Paul:

May I call you by your furst name? I think I knowed you at Goose Creek in 1917 when you had an oil skimming barge near the mouth of the creek. I worked for my uncle in the blacksmith shop just out on the edge of Middletown.

Being an oldtimer in the business I resent some of the statements that I see in your valuable paper sometimes especially those made by some of those who broke in last year in Eastexas like the guy who in todays issue tries to tell us what we dident know about salt domes two years ago. They get pay under a thousand or two feet of salt and their little world turns over mentally and they think they discovered something new.

They have!

Now I dont know what happened at Spindletop, Sour Lake, Saratoga and other fields prior to 1910 because I was only a boy in short I was about to say pants but we only wore a shirt in those days.

Pa opened a blacksmith shop at Jennings in 1902 and he tell me that a well went thru salt at Averys Island when he was a young man and hit a log. Of course it dident impress the scientists because it wasent worth any money.

There was a little boom at a place called Pine Prairie about the time I was old enough to deliver the bits from Pas shop and the discovery well went thru salt.

A well drilled at Damon Mound which came in during Xmas 1915, and was owned by old man Ed Simms and Henry Staitai went thru salt and then hit oil. I know because I sat on the woodpile and looked over the fence which they had around the well while it was drilling.

Pa just came in from feeding the hogs —we're depressing on the farm—and says that some of the early wells at Anse la Butte went thru salt. He knows because he dressed the bits which were wore diamond shaped.

A geologicalist named Elick Dusseon drew some pictures for the Oil Weakley several years ago which showed some producing wells under salt at Vinton.

Pa buts in again and says that Capt Lucas found oil in the salt at Belle Isle.

I tried to make a roughneck job at Hull after I knew you at the Creek but Bud Coyle, the old porcupine wouldn't take me off the crum boss job, anyway we got oil under salt from a couple of wells on the Dolbear lease on the east side.

Now as to the shape of the salt domes Pa says that the shady side of his old shop at Spindletop is covered by drawings made by guys in swedge nipple pants or with pointed beards. He says some of these drawings were made thirty years ago and if you look close you can see that they look like parashoots and mushrooms and cones and everything you could expect a salt dome to look like while these scientific boys were arguing.

The argument usually ended by some guy making a picture of a big legged corous girl.

Guess this is a good place for me to stop too?

SIDNEY STRONG*,

EDITOR'S NOTE: Sidney Strong, oh, yeah.

A stranger addressed the farmer's boy across the fence.

"Young man, your corn looks kinda yellow."

"Yes, that's the kind we planted."

"Don't look as though you'll get more than half a crop."

"Don't expect to. The landlord gets the other half."

"Boy, there isn't much difference between you and a fool."

"No sir," replied the boy, "only the fence."

There is a club in New York devoted to the laziest men in the world. Any attempt by a member to hurry is punishable by a fine.

One day a member was seen driving his car past the club at a high rate of speed. Summoned before the committee, he excused himself by saying that he was too lazy to take his foot from the accelerator.

"Police Station?"

"Yes; what's wrong?"

"I've got a suspicious character here. He wants to pay cash for a second hand car."

A caller at the Barnsdall Oil Corporation's general office inquired of the hall girl if the boss was in.

Hall girl: "Are you a salesman, a bill collector, or a friend of his?"

Caller: "All three."

Hall girl: "He is in a business conference. He is out of town. Step in and see him."

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American Brakeblok Feeds Off Like An Automatic Control

WHEN oil-well brakes are equipped with American Brakeblok the driller can feed off the line gradually, with the ease and regularity of an automatic control. This outstanding quality, together with other advantages of equal importance, has made American Brakeblok the overwhelming choice of drillers and operators.

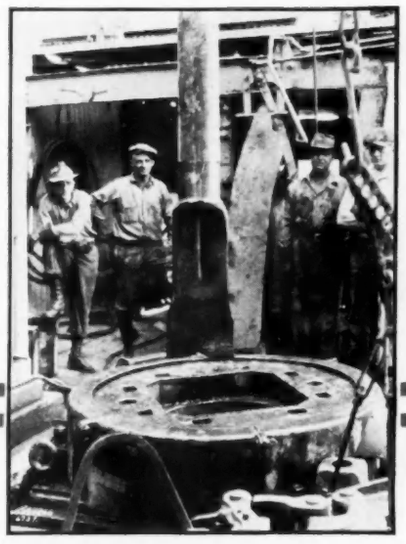
This remarkable brake lining never fails to reduce braking costs. In most cases the expense is actually cut in half. There is a definite saving in man-power, time and flanges.

American Brakeblok gives perfect performance from grass roots to bottom. It does not chatter, score, smoke, burn or squeal. A constant coefficient of friction is maintained and more ton miles of service are invariably given.

American Brakeblok is utterly different from any other oil-well brake lining. It is a dense, homogeneous, non-compressible solid, formed under pressure, completely heat-treated and accurately ground to size. We will be glad to send complete information on request.

ALL SET!

All set to start in hole, equipped with American Brakeblok. Size drill pipe 6 inches; depth at this stage, 4800 feet. This well is the Continental Oil Company's Bixby No. 3, Alamitos Heights, California.



AMERICAN BRAKEBLOK
TRADE-MARK

AMERICAN BRAKE MATERIALS CORPORATION

4660 Merritt Ave., Detroit, Mich., U. S. A.

Industrial and Automotive Division

American Brake Shoe & Foundry Company

Sales Offices: New York, Cleveland, Chicago
St. Louis, Los Angeles, San Francisco

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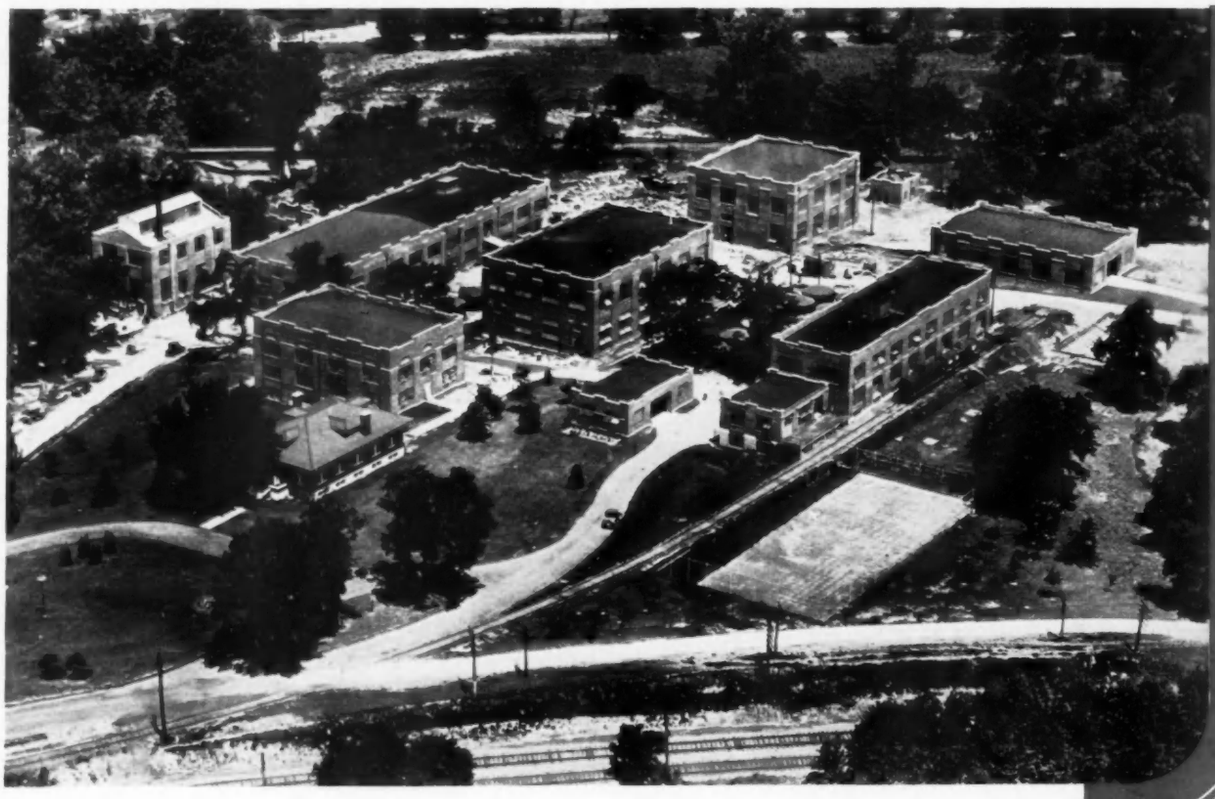
TRET-O-LITE

Process Patented • Reg. U. S. Patent Office

IS PREPARED IN THIS PLANT



The constant, healthy growth of the Tret-O-Lite Company . . . from one small factory to the present plant illustrated above . . is proof of the Petroleum Industry's ever-increasing demand for a dependable, rapid method of reclaiming cut oil and B. S. The Tret-O-Lite Process will recover every drop of oil from crude petroleum emulsions—at an extremely low cost per barrel.

In every district there is a Tret-O-Lite representative who will gladly help solve your emulsions problems—call him.

TRETOLITE COMPANY

MANUFACTURING CHEMISTS

Plants and Laboratories ST. LOUIS - DALLAS - LOS ANGELES

REPRESENTATIVES IN ALL PRINCIPAL FIELDS

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